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MODERN BUSINESS

THE PRINCIPLES AND PRACTICE OF COMMERCE, ACCOUNTS AND FINANCE

PREPARED AND EDITED UNDER THE DIRECT SUPERVISION
OF

JOSEPH FRENCH JOHNSON, A.B., D.C.S.

DEAN NEW YORK UNIVERSITY SCHOOL OF COMMERCE, ACCOUNTS AND FINANCE
AUTHOR "MONEY AND CURRENCY," "SYLLABUS OF MONEY AND BANKING," ETC.

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MONEY AND BANKING

A DISCUSSION OF THE PRINCIPLES OF MONEY AND CREDIT, WITH DESCRIPTIONS OF THE WORLD'S LEADING BANKING SYSTEMS

UNIV. OF
CALIFORNIA

BY

EARL DEAN HOWARD
PROFESSOR OF FINANCE IN NORTHWESTERN UNIVERSITY SCHOOL OF COMMERCE;
AUTHOR OF "INDUSTRIAL PROGRESS OF GERMANY"

IN COLLABORATION WITH

JOSEPH FRENCH JOHNSON
DEAN OF NEW YORK UNIVERSITY SCHOOL OF COMMERCE, ACCOUNTS AND FINANCE;
AUTHOR OF "MONEY AND CURRENCY," "THE CANADIAN BANKING SYSTEM," ETC.

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EDITOR'S PREFACE

This volume discusses questions in which the American people have been forced by events to take a deep and personal interest. The rise of prices and resultant increase in the cost of living since 1897 have provoked universal discussion and even called forth proclamations of disapproval from mayors, governors and other public men. The panic of 1907, which caused the temporary suspension of cash payments by many banks in the United States, is now recognized to have been mainly due to the defects of the American banking system. It is doubtful if any other scientific questions have been the subject of so much popular debate as those which are treated in this volume on Money and Banking.

It goes without saying that no man is fit to plan the digging of a tunnel or the construction of a railroad, to mend a clock or repair an automobile, unless he has had a certain amount of scientific training. In mechanics the world recognizes the need and practical value of science. In finance the same need exists, but it is not yet generally acknowledged. Everybody thinks he understands the money question, or that it is not worth understanding, and the average man is inclined to think that the business of banking is so simple that if our banks have in any way fallen short of their duty, the men who manage them must either be very ignorant of their business or very selfish and speculative in their methods.

As a matter of fact, the science of money and credit,

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while almost as exact in its nature as mathematics, is one of the most difficult in the whole field of economics, and the business or profession of banking, which is founded upon that science and should be conducted in accordance with its principles, is one demanding the keenest and clearest brain. Industry furnishes the red blood of the economic organism. Trade and commerce are its circulatory system. Finance is its nervous system. If the banker is incompetent and fails in the performance of his task, the entire business world is paralyzed.

In the present volume the effort has been made to give the reader in the clearest possible language a scientific knowledge of money and credit and an accurate description and analysis of the various banking systems with which the world is now having experience. The subject is difficult and no reader can expect to get enlightenment from this book unless he is willing to think as he reads. If he will do that, I feel certain that he will quickly grasp all the principles expounded and in the end discover that many business problems which have perplexed him have been made easy of solution.

The editor cannot too strongly advise that this volume be read carefully by the general business man. The banker, of course, should understand the subject. If he does not, he is conducting his business by rule of thumb, and is courting disaster. But the business man should not think that Money and Banking are matters with which he is not concerned. On the contrary, they treat of matters which immediately concern him. The relation of money to the upward and downward swings of prices is something which the average business man does not perceive, yet it is something which he ought to understand, for his prosperity often depends on causes affecting merely the demand for and supply of money. The prices of commodities are merely an expression of the value of money and they change whenever money changes. The business man who knows only the conditions which govern the value of the commodity which he handles is only half protected against loss. If he would be safe he must know also the conditions which determine the value of money.

JOSEPH FRENCH JOHNSON.

New York University.

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MONEY AND BANKING

PART I: MONEY

CHAPTER I

FUNDAMENTAL ECONOMIC CONCEPTS

1. *Reasons for the study of money and banking.*—The study of money, currency and banking is necessary to every person who desires a thoroughgoing knowledge of business. Every one who has to deal with prices, whether he be a producer or a consumer, a working man selling his services or a capitalist receiving interest on his investments, in order to conduct his affairs intelligently must understand the forces affecting prices of the commodities or the services in which he is interested. Every fluctuation of price affects the welfare of every person who buys or sells, and the ability to foresee these fluctuations enables the business man to avoid loss and gain profits.

The science of money and banking deals with prices, and attempts to explain their fluctuations so far as the cause of these fluctuations is due to changes in the conditions of currency and banking. The influence of currency and banking upon prices is much more important than is generally supposed.

Every business man understands the fluctuations of price that are brought about by alterations in the supply of or the demand for commodities or services. He knows when five men are bidding for one article that the price will go up, and that when five sellers are offering their goods to one man the price is likely to go down. He is not likely to understand, however, how prices in general may go up in consequence of a new discovery of gold in the Klondike or an increase in the amount of bank credit outstanding. Yet these latter forces are just as potent, and even more enduring, than the former in affecting prices.

To offset the enormous damage chargeable against the panic of 1907, we must place on the credit side of the account an item whose importance is becoming more and more apparent. This item is the education of the American business man in the science of currency and banking, at least to the extent that he appreciates as never before the relation between a defective currency system and his own prosperity. He feels that much of the loss and suffering of that disaster was unnecessary, and that in the future repetitions may be considerably mitigated.

If an architect should plan the construction of a building which collapsed in the first severe storm, he would probably be held for criminal neglect in disregarding the laws and principles of scientific construction. Should not the architects of our currency and banking systems be held equally responsible for the collapse of their structures when they have disregarded scientific principles clearly established?

The study of the science of currency and banking is not only obligatory upon the architects of our monetary system, but it is also profitable to those who must adapt their business to existing systems. If the system is defective, they must know how to escape the consequences of such defects; they must know enough to move out of the building when the first cracks appear in the walls, or when evidences of a storm are manifest.

2. *Warnings of the late panic.*—During the winter of 1906 and the summer of 1907 the economists and students of finance had sent out bulletins of warning and displayed storm signals of the approaching trouble. The intelligent navigator of business craft who could understand the significance of these signals sailed close to the shore or kept in port, while the heedless and ignorant put up full sail to take advantage of the breeze of prosperity, and found themselves caught unawares in the squall of October.

3. *Science.*—Science is the study of the relation of cause and effect. Man has an inborn curiosity to know the reason for things, in order that he may be master of his environment and that he may know how to produce desired effects through his power over the causes producing those effects. Therefore, our ultimate aim in studying the science to which we have addressed ourselves is to be able to make use of such knowledge in increasing our business efficiency, and avoiding waste of effort in materials through ignorance.

Money and Banking is a part of the science of finance, which in turn is one of the branches of the more general subject of Economics or political economy.

4. *Finance.*—Political Economy is the science of business; that is to say, the science of the relations of men with each other in the production, consumption, distribution and exchange of goods. Finance, one of the subdivisions of the field of economics, deals with control of property, especially with that form of property which economists call the production goods, i. e., land, natural resources, factories, railroads, machinery, etc. Control of property is attained through changes

of ownership, or possession of the highest efficiency in production goods. Finance, therefore, is a science which treats of the assembling and management of capital, using the term in the broadest sense. It also treats of the methods and instruments used necessary to this end, hence including money and banking. Money and banking deals with the instruments and methods, through the agency of which the exchange of property of all kinds is accomplished. The ultimate object of all business is to produce the largest amount of wealth, and to distribute this product to the consumers. Wealth is the general term which includes all material things which satisfy human wants. In other words it includes those things which possess the quality called utility, which is simply the power to satisfy human wants directly or indirectly. In order to create this quality of utility in material things it is necessary to bring together three things; labor, natural resources, and capital goods. This latter term includes all the artificial instruments of production—tools, buildings, railroads—which have been made by men.

5. *Technology and business.*—In every enterprise there are two distinct sides, that is, a technical and a business side. The manufacturer must not only have knowledge of the best methods and processes for turning out his product, but he must know how to buy his materials, hire his labor, secure and invest his capital and sell his product.

Economics has nothing to do with the technical side of industry. It is not concerned with the best methods of treating the soil in agriculture nor with the construction of machines in manufacturing. It confines itself solely to the study of the organization and relations of the three factors of production, land, natural resources, and capital goods. If everybody provided for his own wants first, by producing what he consumed, there would be no such thing as business and economics. Business begins the moment one person produces something for another but depends upon another to supply him by exchange with the things he needs. Since practically nobody is economically self-sufficient in these days, everybody is concerned with business problems.

6. *Business the result of specialization of labor.*—This fact of the universal division of labor or specialization of labor is the very foundation of our economic system. The procedure of a modern man in supplying his wants is very indirect. If he hasn't some already, his first move is to supply himself with money which he exchanges for the goods with the merchant. The merchant has previously acquired the goods in a roundabout way through the channels of trade from the producers. The producers are organizations of men who take the materials from their natural state and work them up into finished goods capable of satisfying human wants. The work of the world, in which we observe nearly everybody so busily engaged, is production. Sometimes it requires very close analysis to discover how some occupations assist in preparing goods for consumption and use. At first sight such occupations as banking, brokerage, accounting, etc., seem to have little to do with the production of goods, and yet as we shall see further on, they are as necessary and effective to this end as agriculture and manufacturing.

7. *Production.*—To create the greatest utility in goods—that is, to give them the maximum power to satisfy human wants, they must be given the proper form; they must be ready for consumption at the proper time and in the proper place; and lastly they must be in

the possession of the consumer, to whom they afford the highest gratification, or at least in the possession of the person who is willing to sacrifice the most for them.

Thus production consists not only in changing the form of material things, such as changing the chemical elements of the soil into wheat and finally into bread, or transforming the standing timber into a dwelling house. It consists just as truly in changing the locality of the goods; for instance, wheat in Dakota has very small utility to the people, but after it has been transported to New York City it gains immensely in utility. Still further the mere holding of goods from one time to another may increase their utility. It is the function of merchants and warehousemen to hold goods until they shall be called for by the consumers. These persons create utility just as truly, though not as obviously, as the farmer or the manufacturer.

8. *Production by change of ownership.*—Lastly utility of goods is increased by changing the ownership of them. It is with this last phase of production with which we are concerned in the study of money and banking. Under our system of specialized industry, products have very little utility to the producer. While the products of other producers have very high utility, by exchanging his own for products of others, each gains in the amount of utility at his disposal. This operation of exchange is relatively simple when the producers and consumers are close to each other, but when the producer is a Chinese tea grower and the consumer an elderly English lady several thousand miles away, the process of getting the tea from one to the other is a very complicated affair, requiring for its accomplishment a vast number of institutions and ingenious devices.

All our modern material civilization is practically due to the extension of the principle of the division of labor. It is only within the last century or two that the whole population is engaged in producing things which they do not intend to consume. The enormous increase in efficiency of this method over the method of each producing for himself is instantly apparent when we reflect on what portion of the wealth which we consume daily would be ours if we were obliged to produce it by our own unaided efforts. Now this whole system of division of labor depends upon the exchange of goods. The products must find the consumers, and this involves from one to one hundred changes of ownership. Therefore we see that our modern civilization has been dependent upon the growth of commerce, and future developments in the division of labor will depend upon the facility with which its various classes of commodities can be exchanged.

9. *Tardy recognition of value of exchange.*—It is a curious fact that this most vital part of civilization and commerce, money and banking, has not been understood and appreciated until recent times. A few centuries ago, the merchant was regarded with suspicion and placed not far above the thief in the social scale. The merchant who bought an article for $1 and sold it for $1.50 was thought to have robbed the purchaser of 50 cents. The banker who loaned money at interest violated one of the laws of the church which forbade taking of usury, as interest was called at that time. It is only in very recent times that the persons who perform this most vital economic function of exchange—the bankers, financiers, brokers and merchants—have been understood and appreciated, and even yet we find the medieval idea still prevalent among a large class of peo-

ple that these persons are non-producers and parasites.[1] Such persons fail to see that without the activity of these non-producers, the labor of the working man in field and shop would probably be less than one-tenth as effective in producing real wealth as it now is.

10. *Private property.*—The most fundamental institution of our economic system is that of private property. If we take a sweeping survey of the world we shall perceive that those countries which have advanced farthest in civilization and economic well-being are those in which the rights of private property and inviolability of contracts are most strictly enforced. The world knows no other way to secure the preservation and utilization of its resources, or the production of increasing quantities of industrial equipment or the full efficiency of human effort, whether of hand or brain, than by the protection of property rights.

11. *Property and wealth.*—Wealth and property are not synonymous terms. Wealth signifies material things possessing utility; property is a claim which confers control over the use of wealth. When we say a person is wealthy, we mean that he has property rights over a considerable amount of utility-bearing things. These property rights are of great variety, from absolute ownership, subject only to the police power and eminent domain of the government, to temporary possession of the tenant or borrower.

A great many things popularly classified as wealth are not real wealth at all, but representatives of wealth, A deed is not wealth; it is simply an evidence of property rights, as a bond is simply evidence of a claim for money payment, usually secured by a mortgage. A share of corporation stock is a claim to a certain portion of the earnings of a corporation set aside by the directors as available for dividends, and in case of the dissolution of the corporation, to a portion of the assets. A United States note or greenback is simply an evidence of a claim against the Government for payment of a certain number of dollars on demand. The fact that it is readily accepted by everybody in exchange for wealth does not make it real wealth.

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[1] Even so profound a philosopher as Lester Ward in his *Dynamic Sociology* written in 1875, fails to appreciate the economic service of the merchant and financier.

A gold coin is real wealth to the extent to which the metal it contains has utility. In the case of all the other forms of money we are confronted with a problem whether to classify them as real or representative wealth. Money undoubtedly has an indirect utility in so far as it assists in production, and would seem to go along in the same category as railroad cars, which increase the utility of goods by moving them from place to place—money increases the utility of goods by moving them from owner to owner.

We have seen how the division of labor, where nearly everything is the subject of private property, requires continual exchanging of wealth in order that it may come under control of the persons who can best utilize it. There is another consequence of the division of labor: It requires that the factors of production be organized in great groups, in order to be most effectively utilized.

As the result of this tendency, we have the United States Steel Corporation, with its 150,000 men working with a billion dollars' worth of natural resources and capital goods, and with the production of iron and steel. This grouping together of a large number of industries, originally independent and separate, has eliminated a vast number of exchanges. From the iron ore at the mine to the finished steel rail there is no change of ownership of the materials.

12. *Integration of industry.*—As a consequence of this integration of industries there is much greater simplicity and much less risk of industrial maladjustment than before. The economy of this integrated tendency will be more apparent when we have learned how industrial crises, speculation or trade depressions are caused by failure of the mechanism of exchange to work properly. As we decrease the number of exchanges in the normal production, we reduce by so much the opportunities for breakdowns.

These fundamental economic facts and principles are mentioned here to give the student a proper idea of the relation which money and banking bear to our whole industrial system. Money is an instrument and banking an institution to assist production of wealth and thereby increase the material welfare of the people by facilitating the indispensable operations of exchange, without which all other productive effort would have but a fraction of its efficacy, without which we would still be in the state of industrial barbarism.

The idea of private property is not as a great many would imagine, innate in the human mind; it is a product of centuries of slow evolution developed by necessity. Among the most primitive peoples communism is general, except in things peculiarly personal. The first exchanging was not between individuals, but between tribes, and originated in mutual gifts rather than any contract of *quid pro quo.*

CHAPTER II

EXCHANGE

13. *Beginning of exchange.*—Regular exchange did not exist until one tribe had a surplus of particular commodities which were desired by the tribes having no facilities for producing them. These articles, which were superfluous in the tribe producing them, had a peculiar value to other tribes which perhaps could not produce them at all. If these commodities happen to be of an imperishable nature, as pottery, weapons or furs, they might easily come to have a use as a medium of exchange for home products. The necessity of obtaining such commodities from other tribes gave them a kind of fixed value, and thus they became the most convenient standard by which the value of all other things could be compared.

In the evolution of money a vast number of things have been used for the purpose of fixing values, but practically all of them represent surplus products which could be exchanged with foreign tribes or nations for imported wares.

Exchanging of goods within the tribes was a very slow development, and when it did develop it was most natural for these articles of foreign origin with a fairly definite exchange value already fixed to become the common medium of exchange and standard of value.

By some authorities economic history has been divided into three stages, according to the method by which exchanges were made: Barter, money and credit.

In the first or "barter" stage goods were exchanged for goods. In the second stage certain goods had acquired an exchangeability greater than others, and were accepted not only because they had utility for human uses, but also because they had this additional utility of exchangeability. People accepted them not because they desired them to use, but because they knew they could get by trading things they really did want for use. Thus these special commodities, such as beaver skins, beads, tobacco, etc., came to have a value quite apart from their commodity utility. We shall see when we come to the study of "value" that one of the principal factors which confers value on goods is utility. This extra exchange utility is the most important element in the value of money.

14. *Barter.*—The limitations of exchange by barter are obvious. The two objects to be exchanged must be of approximately equal value or the difference must be made up by adding smaller articles until an equivalence of value is reached; otherwise no exchange can be made. If one man has a skin which he wishes to trade for food, he must find somebody with a surplus of food who wants a skin. If the skin is very valuable the owner might be compelled to take a large quantity of food at one time, perhaps much more than he wanted. In the barter stage, therefore, exchange was so clumsy and uncertain that it was of necessity incidental rather than essential in economic life. It was hazardous for men to set about manufacturing articles for which they had no use themselves and expect by exchange to obtain the necessities of life. In this stage the market for products was very uncertain and could not be depended upon.

15. *Money.*—Money is a commodity, as we have seen,

but when it is exchanged for other commodities we do not call the operation barter, although it is an exchange of goods for goods. The fact that one of the exchanged articles is accepted solely because it can so easily be exchanged for something else which the holder really wants for use or consumption, introduces an entirely new principle.

Trading, which was so limited, clumsy and uncertain in the stage of barter, now becomes easy and regular. If I have something of value I do not have to look about to search out the person who not only wishes to possess it but who has something which I need. I have simply to find a person who has money, because I know that by accepting money I can get whatever I wish with it. Exchanges, therefore, become three-sided. First, the trading of goods for money, and then of money for goods. The first part of the operation, the exchanging of goods for money, is but the first half of the complete exchange. Until the money has been spent there is a suspended exchange, which must be completed sooner or later by the exchange of the money for goods. Therefore, all trade is finally barter, and the use of one commodity in this peculiar way as money complicates, but also greatly facilitates, exchanging of goods for goods.

16. *Money represents incomplete exchanges.*—All money existing at this moment represents incomplete exchanges. Every possessor of it will sooner or later offer it for goods, because money has no use except to be spent. There is no utility to be had from it until it is parted with. The miser perhaps realizes a certain satisfaction from the mere possession of money, but with the rational person the possession of money represents a postponed satisfaction. Quite naturally the an-

ticipation of future satisfaction to be obtained is quite pleasurable, but to say that the money rather than the anticipation is the source of the satisfaction is to fall into confusion of thought. The boy with the circus ticket in his hand is filled with joyous sensations whenever he gazes upon it. A railroad ticket to California conjures up the smell of orange groves and other delightful things. But neither of these things is the real source of the gratification. The miser is the boy who prefers to miss the circus rather than to give up the ticket.

17. *Credit.*—There is still a third stage of economic evolution beyond the stages of barter and money. This we call the credit stage. Just as exchanges were limited and clumsy in the barter stage, necessitating the invention of money before men could specialize in production to any great extent, so the time arrived, in the Middle Ages perhaps (although the use of credit was not unknown in the ancient world), when money, even the most refined forms and systems of money, became too cumbersome.

In this last stage exchanges can be made without the use of money at all. A man may be able to buy and sell without possessing any money, or even any property. The consideration he gives may be merely a promise to pay money or its equivalent value at a future time. In this last stage exchange frees itself entirely from former limitations and under specialization of industry can extend until scarcely any man produces the thing he himself consumes. Everything is produced for the market, and the market does not fail so long as the machinery of credit is working smoothly. Unfortunately, credit is like fire, and its use is attended with risk, but nobody would think of foregoing the use of fire because houses sometimes burn down, nor would anybody advocate the abolition of credit because sometimes its abuse brings on commercial disasters and panics.

Throughout this book the word "credit" will be used in a strictly technical sense, that is to say, with the following meaning: *Credit is a postponed payment of money.* The word is employed in ordinary usage to mean the ability to borrow. Thus, a person has good credit when his reputation for financial integrity makes it easy for him to borrow the funds or property of others. Much of the difficulty and confusion inherent in the discussions of credit grow out of this vague usage of the word. If it is kept in mind that a credit is a perfectly definite thing, i. e., a postponed payment of money, clear thinking will be possible.

Our definition implies an incomplete exchange. One side of the exchange has been completed, but so far no equivalent has been rendered. The payment has been postponed. It is convenient, however, to regard the credit as itself an equivalent and a thing having value. If a merchant sells a bill of goods to a customer and agrees to postpone the payment for three months, he has received for the goods a promise, which is valued by him as the full equivalent of the goods. If this promise is put in the form of a promissory note (which is simply a documentary evidence of the promise) this promissory note is a concrete object of value and can be itself exchanged for other things of value.

18. *Credits as media of exchange.*—The fact that a promise to pay money is a valuable thing in itself suggests immediately the possibility of using such promises as a medium of exchange if they can be put into such form that the ownership in them or the title to them can be transferred from hand to hand. Just as the

value of money is an artificial quality, created by its ready exchangeability, so credit may come to have a value for the same reason. People accept money readily in exchange for anything else because they know that it gives them command over any piece of property that is for sale. In other words, because it is convertible into property practically at all times, in all places and under all circumstances. Likewise, credit has value as a medium of exchange only to the extent to which it is convertible into money or directly into property. Convertibility is therefore the very essence of the value of money and credit.

Money we saw was simply an indirect barter, the operation being lengthened by the use of an intermediate thing called money. With the use of credit the operation is still further lengthened, and the steps in the complete transaction may run as follows: Goods are traded for credit; credit is traded for money; money is exchanged for goods.

Suppose a merchant buys a bill of dry-goods from a wholesale establishment and gives his three-months note therefor. The wholesale house may take this note to the bank for discount, receiving a credit on its deposit account. When the note is due the bank may receive a check from the retail merchant who made it. This check may be cashed at another bank and may be paid out again to a manufacturer, who has received a check from the wholesaler drawn against his deposit at the bank. The manufacturer may use this cash to buy cotton from the customer of the merchant who consumes the dry-goods first bought. Reduced to its simplest terms, the cotton grower has bartered his cotton for cloth, but the transaction has involved a very complicated series of exchanges in order to accomplish it.

This complexity introduced by the use of money and credit would seem to increase the difficulty of exchanging goods for goods, but in reality it facilitates the process immensely. While seemingly the most expensive mode of making exchanges, in reality it is the most economical. The profits and salaries paid to the merchants and bankers are added to the cost of the finished cloth, and the planter must give so much more raw cotton for it, but if these middle men did not exist it is likely that the planter would have to manufacture the cotton and the cloth himself at a hundred times the real final cost. This is a case where the most indirect route is in reality the shortest and cheapest.

19. *Money and credit representatives of wealth.*—Money and credit are representatives of wealth rather than real wealth. This statement seems to involve a paradox because of the habit which has been acquired of regarding as wealthy a person who has control over a large sum of money or credit. The popular conception of a wealthy man is very likely to approximate the cartoonist's idea of a rotund individual wearing a silk hat and a costume with a dollar-mark pattern and surrounded by bags of specie.

The wealthy person in reality is one who has control over a large amount of goods or real wealth. However, in estimating wealth we find it convenient to reduce it to a sum of dollars' worth rather than to enumerate all the items of goods contained in it. A millionaire is not a person who owns a million dollars in money, but whose property rights are estimated in terms of dollars. The millionaire may rarely have in his personal possession more than a thousand dollars in money, but because his property rights are more or less convertible into money we fall into the error of carelessly considering him as possessed of a million dollars. Unless we think clearly on this point and rid ourselves of this error, we are likely to find ourselves blocked in dealing with problems in money and banking.

The value of money, except in the case of metal coins, which have a commodity utility, is dependent upon its convertibility from property into goods. If everybody attempted to convert the money and credit in the world into goods simultaneously, money and credit would lose its value entirely. It is only because there is a real need for this particular kind of utility in making exchanges that the value of money and credit is maintained. The value of money and credit, then, is dependent entirely upon a habit which people have of accepting them in exchange. When there is any reason to doubt that money and credit will be accepted, we find its value shrinking away and are confronted with the phenomenon of a depreciated currency.

20. *Classification of wealth.*—There are two kinds of economic goods: "Consumption goods," which have direct utility and satisfy a human want, and "production goods," which have indirect utility and assist in producing consumption goods. The value of production goods is entirely dependent upon the consumption goods which they help to produce, just as the value of labor is derived from its product. If production goods or labor is so limited that it can produce only goods which have no market value, they are themselves valueless. Workmen may be ever so skilled in certain lines of work, but if the product is unmarketable they will look in vain for employment. The machine may have cost $10,000, but nevertheless may be thrown upon the scrap heap to-morrow if the product ceases to be purchased by consumers,

or if another machine is invented for doing the work more cheaply.

21. *Entrepreneur system.*—Production requires the employment together of land, labor and capital goods. Under the coöperative system the owners of the capital goods and of the land unite with the laborers in the production of a certain commodity and divide among themselves the product or the proceeds of its sale on the market. This system of industry has been found less satisfactory as a rule than the entrepreneur system, so called, by which one man, the entrepreneur, undertakes the responsibility for the industry. He contracts at a fixed rate of compensation for the use of capital and land, and hires his labor at fixed wages. He endeavors to realize from the enterprise a larger net sum than the payments he must make to the workingmen, the capitalists and the landlords. The difference he keeps for himself as his profit. If there is a deficit he suffers the loss. As a rule the entrepreneur, before he can make contracts, must have a certain amount of capital of his own as a margin against loss. Otherwise, the capitalists, workingmen and landlords must have an extra remuneration for the risk they take. In dealing with a capitalist the entrepreneur does not borrow machines or other forms of capital goods, but he borrows a certain sum of money or purchasing power which he can convert at will into production goods. The capitalist has funds or purchasing power to loan to the entrepreneur. This purchasing power represents a claim on goods in general which are for sale on the market. When the entrepreneur borrows these funds he immediately uses them to claim whatever he needs in his business. It was not the money he wanted, but

the buildings, the machinery, raw materials, etc. Money is not necessary in production; it is simply the most convenient way of getting control of the things needed.

22. *Capital.*—The conception of capital is one of the most difficult and confusing in the whole science of economics. Just as in the case of wealth, most people's idea of capital is a sum of money. Until recently most economic writers used the word "capital" to include not only money, but everything we have called production goods. The fundamental idea in the word "capital," if it be analyzed closely, seems to be this: a source of income. The Eskimo would call his canoe a part of his capital because he could attribute to its use in fishing a certain proportion of the day's catch. This proportion might be measured by the amount of fish he could have obtained without the use of the canoe. If he could catch five fish without the canoe and ten fish with it, the canoe might be regarded as the source of the income of five fish. Capital, therefore, has economic importance only as a source of income, and its value is entirely proportionate to that income.

When men reached the stage of calculating income in dollars' worth instead of in specific commodities, then capital, the source of the income in dollars' worth, began to be regarded as a sum of value rather than as a machine or building, etc. Therefore, we might say that capital is an abstract concept of the value or dollars' worth appertaining to the source of an income, whether such source is tangible or intangible.

The merchant regards as his capital his stock of goods, his store building, and fixtures, because they are the source of his money income. If he were asked to make a statement as to his capital, he would sum up the values of his business in terms of dollars.

23. *Capitalization.*—The word "capitalization" presents a difficult conception unless we hold in mind the root meaning of the word "capital": Capitalization represents the relation between income and capital, which may be made clear by an illustration. Suppose a manufacturer has a plant which yields him a net income beside his own salary and a reasonable profit for undertaking the business of say $10,000. Suppose this $10,000 is the average for a number of years, which can be made a safe basis for future calculation. If this manufacturer were asked to fix a price on his establishment, how would he go about it? Perhaps the whole plant, machinery, building, etc., did not cost more than $10,000 originally, but that its high earning power is due to the possession of a patent on certain of the machinery. Obviously he would not be willing to sell the business for $10,000, or even $20,000. What he is really selling is the right to an income of $10,000 per year. The price which he would demand for his business would not be much less than he would have to pay to obtain the $10,000 income from another source. If the only income he could buy with the proceeds of the sale of his business were bonds yielding 5 per cent per annum, he must needs receive at least $200,000 in order not to be a loser in the transaction. He could not demand more than $200,000 because no purchaser would be willing to buy a $10,000 income at a price which would purchase a $11,000 or $12,000 income in the security market.

If the owner of the plant thought of incorporating a company and issuing shares of stock, he would be confronted by the same problem of placing a valuation on the business in order to properly capitalize the corporation. In this case if the income were practically fixed at $10,000 and there was a wide market for the shares, it is likely that at a capitalization of $200,000 the shares would sell at somewhere near par. That is to say, the total sum of their market value would be about $200,000.

Capitalization, therefore, is the process of placing a valuation upon the source of an income. If a corporation is overcapitalized, the valuation which has been placed upon its assets or the source of its earning power has been too high; in such cases the shares sell below par. This may happen not only because the net earnings are too small as compared with the capitalization, but because of the uncertain future, or because the demand for them is very limited. Corporations which have been overcapitalized at the beginning may find that the overcapitalization has disappeared in the course of time because the earnings have increased in amount and stability. In the language of finance, "the water has been squeezed out of the stock."

This subject of capital and capitalization belongs to the broader science of finance, but so intimate is the relation between capital and currency that it is best to get a clear idea of capital at the outset. Capital in its various forms like consumption goods must change hands in order to realize the greatest economies in production and the most efficient use of all forms of production goods. To be most effectively utilized, the land, machinery, buildings, materials, etc., must find their way into control of those entrepreneurs who can most efficiently organize and manage them. This very intricate process gives to finance its mysterious and difficult character, so that many students are frightened away at the outset. The movement of capital is so intimately related to money and banking that one cannot be understood without mastering the other.

24. *Demand for capital goods.*—Capital goods are produced by industry for the market, just as are consumption goods. They are produced either to fill a demand already existing, as when the manufacturers work on contracts, or they are made in anticipation of a market when they are ready for sale. The demand for capital goods comes from entrepreneurs who wish to use them in industry for the production of more goods. Before the entrepreneur can take capital goods off the market or give orders for their manufacture, he must have purchasing power. This purchasing power he may acquire in a variety of ways. First, he may possess the purchasing power or capital as his own property; second, he may be entrusted with the purchasing power or capital of other men on various terms, either for a fixed compensation per annum or for a definite share in the profits of the business.

This purchasing power exists in the form of money or credit; in most cases it is bank credit in the form of a deposit, against which checks can be drawn to make payments. It has its origin in income which has not been spent for consumption goods but which has been saved. Incomes are derived originally solely from production. Those who gain a personal income without producing or assisting in the productive process appropriate the incomes of others; but originally every income was the product of someone's productive industry.

25. *Money incomes.*—Under modern conditions very few of the producers take a share of the product as their income. They prefer to convert the product into purchasing power, that is, money or credit, and distribute the proceeds as money income. This money income, however, is simply representative of the products,

and is convertible into any goods for sale on the market. Therefore, if these income-receivers prefer to save this purchasing power rather than assert their claim to a certain amount of consumption goods, they enlarge the fund of capital.

The motive for this abstinence from consumption is normally not for the purpose of abstaining from spending indefinitely, but for the purpose of spending directly or indirectly for production goods in the hope of receiving an income. This conversion of purchasing power into production goods rather than consumption goods is real investment. If it were not for this saving and investment there would be no demand for capital goods and none would be produced. Saved income, therefore, represents a claim to a certain quantity of production goods which have been made and are awaiting a market somewhere in the world. The prospective investor is the man who determines how much and what kind of production goods shall be taken off the market, thus leaving a vacuum to be filled by subsequent production.

26. *Methods of investment.*—A very small proportion of the savers or of the original creators of capital are capable of investing it themselves. The merchant may use a part of his income to increase his stock, or the farmer to buy new implements, fences, etc., but probably the greater part of all saved capital is turned over to other entrepreneurs for investment. There are a number of methods by which the capital is transferred from the saver to the control of the entrepreneur who gives the orders for production goods. First, the saver may deposit his savings in a savings bank, thus making the bank his agent for the investment of the sum. The savings bank will perhaps buy bonds of a railroad,

which thus obtains the capital and expends it in rails and equipment. Secondly, the saver may deposit his savings in a commercial bank, in which case the capital finds its way into the hands of commercial borrowers of the bank and is used as working capital to buy raw materials, to pay wages and to carry customers' accounts for short periods. Thirdly, the saver may himself buy stocks and bonds from a bond house or a trust company, and thus make these institutions his agent for investment. Fourthly, the saver may hoard actual cash, which simply means that investment is postponed for the time being.

27. *Real investment.*—In the ordinary use of the term the purchase of stocks and bonds in the market would be called investment, but it is not, however, true investment. In this case the saver has simply shifted to the seller of the bonds the responsibilty for the real investment of the capital, i. e., the responsibility for converting it into production goods. It is only when the capital is in the hands of the entrepreneur that an investment can take place. Entrepreneurs are constantly bidding for the use and control of this new capital which is as constantly accumulating. The entrepreneur who can offer the best rate of interest or the highest dividends with the best security has the advantage in this competitive bidding.

Under our modern conditions of industry the large corporations are likely to be able to use this capital to the best advantage, and hence are in a position to make the most attractive offers to savers. Therefore, we find an ever increasing percentage of the savings of the community flowing in that direction. This is to the public advantage, in so far as the corporation is able to utilize the production goods to which the capital gives them claim, and the final result is an increased amount of product. For this reason, any system which facilitates the flow of capital from the savers into the hands of the most efficient entrepreneurs is a distinct economic gain. All the highly specialized financial institutions perform this economic service, and their productivity, indirect though it be, is to be measured by the increased efficiency of the capital which they have diverted into the most productive field. The stock exchanges, the financial and commercial banks, trust companies, underwriting syndicates and all the machinery of high finance are economically beneficial to the country in the degree that they perform this function.

Furthermore, this high development and delicate adjustment of financial institutions is only possible when the currency of the country is of the soundest and most scientific character. Every defect in the currency system makes it more difficult or hazardous for such institutions to do business and is a handicap, the effect of which can be measured by the diminished efficiency of all the industries of the country. The man who says that currency and banking questions are no concern of his would probably be surprised to learn that his wages are smaller or the prices of the goods he buys are higher on account of some weakness or defect in the system which the currency reformers are striving to mend, yet such is the case. Causes which are the most potent in producing effects are frequently the most obscure and unappreciated.

CHAPTER III

VALUE

28. *Value a register of economic forces.*—Since in our modern civilization every man satisfies his wants through exchange of what he produces or helps to produce, for what he consumes, every man is perforce a dealer in values. Specific commodities are reduced to terms of abstract value, and are dealt in as such. The workman sells his labor, say, at $100 a month, and receives an income of $100 worth of goods and services of his own choosing from the market. His economic welfare is entirely a matter of the relation between the effort required to earn the wage, and the amount of utilities which can be obtained with that wage. Either a fall in the rate of wages or an increase in the prices of goods has the same effect in altering the relation to the disadvantage of the wage earner. Economic changes therefore always appear as changes in values. Value is simply a register or index of economic forces.

The reward of the entrepreneur for his productive efforts comes in the shape of profits. Profit is simply the difference between the cost of the product and the selling price. Any change of values which alters the cost or the selling prices has its effect on profits, either diminishing or increasing them. We may call profits the mainspring of industry, because they are the motive which induces the entrepreneur to organize industry by borrowing capital, employing labor and renting land. When the expectation of profits is small, the entrepreneur has little inducement to encourage any new enterprises or to extend the old. From such circumstances dull times are likely to ensue, low rates of interest and smaller wages, or nonemployment of workingmen. On the contrary, when the expectation of profits is good there is likely to be a season of great prosperity, with every resource utilized to the utmost, and labor in great demand at the highest wages. Alternate periods of depression and prosperity are therefore the effects of certain conditions of value.

The fact that currency and banking have a most intimate relation to values, and therefore to profits, gives to the study of these subjects a high practical utility. The man who understands the effect of currency and banking conditions on values is in a position to foretell with scientific accuracy the future course of prices, and hence may prepare himself for changes in general business conditions.

29. *Meaning of "value."*—A distinction must be made between the terms "value" and "price." The value of an article is its exchange relation to all other articles. The value of this book, for example, can be determined only by comparison with something else having value, as for instance a bushel of wheat. The value of the book might be expressed by saying that it is worth five bushels of wheat. This would be entirely satisfactory to anybody who had a definite idea of the worth of five bushels of wheat, but to another person it might mean nothing whatever. In order to make comparisons which will be readily understood by everybody, it is necessary to have a common measure or denominator of value, just as it is necessary to have an arbitrary unit of weight or length. In the Bureau of Weights and Standards at Washington are kept certain yard-

sticks, weights and vessels which are the standard units of length, weight and capacity.

30. *Definition of the dollar.*—Just as Congress has declared that a certain length shall be a yard, so it has also declared that the unit of value shall be a dollar, of 23.22 grains of pure gold. The only definition for a dollar is that it is 23.22 grains of gold. All other dollars are so called because they are convertible into the standard gold dollar. In this convertibility lies their value. They are not standard dollars, but representative dollars. Price is simply value expressed in terms of dollars. If I say this book is worth $5, I mean that it is exchangeable for five times 23.22 grains of gold, or its equivalent.

If we speak of a person as being worth $50,000, therefore, we mean that he has a legal title to property consisting of various forms of wealth having a total exchange value of fifty thousand times the exchange value of our unit of gold, or its equivalent. In order to realize this exchangeability, however, it is first necessary to convert the wealth into money, which is ordinarily very difficult to do at the market price, and then convert the money into goods desired, which is very easy to do.

31. *Exchangeability the sole utility of money.*—The desirability of money as a form of property is due solely to its ready exchangeability; for any other purpose it is inferior, producing no income, as do factories, stocks, bonds, etc., and requiring extra precautions against theft. Its loanability is simply another form of its exchangeability. The borrower purchases the income-yielding wealth and promises to divide the income with the lender.

32. *Gold not an ideal standard.*—Gold is very far

from being an ideal standard of value. Suppose the yard-stick had the objectionable habit of shrinking and expanding, being thirty inches one year and forty inches the next. The merchant contracting to take one thousand yards of cloth a year hence would run the risk of losing on the deal merely on the fluctuations of the yard-stick. The dollar is just such a measure. Its value is changing constantly. This fact is concealed from the ordinary observer, who attributes all fluctuations in prices to commodities rather than to the dollar itself.

Value is a ratio between 23.22 grains of gold in a dollar and the value of the thing to be measured. The ratio can be altered by the changes in the value of gold as well as by changes in the value of goods. If wheat falls to 50 cents per bushel it may be because of an alteration in the relation of demand to supply in reference to wheat, or it may be because of a change in the value of money. If the price of wheat alone has changed, while the prices of all other commodities remain stable, the conclusion must be that the changes were due to causes affecting wheat alone. However, if all prices have shown a tendency to move in the same direction, especially when it is reasonably certain that there have been no changes affecting the relation of supply and demand of these goods, the explanation of the fall in prices must be sought in money itself.

The Free Silver Party was right in 1896 when it attributed the general fall of prices to an increase in the value of gold, the sole standard of value. Their remedy, bimetallism, or a double standard of both gold and silver, would have raised prices, but it would have caused such a disturbance of prices and credit, both temporarily and permanently, that many think the cure would have been ten times worse than the disease. A discussion of this principle, however, belongs to a later chapter on the Standard of Deferred Payments.

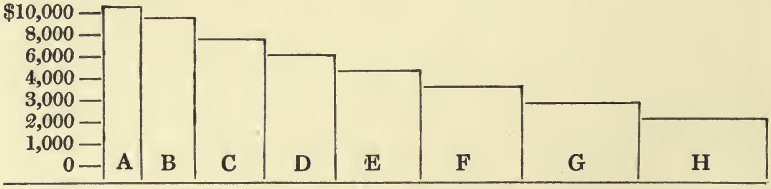
The idea that the value of the dollar is a constantly fluctuating thing is so novel to most people that it is worth while making it very clear. In order to do so it is perhaps advisable first to consider the general principles which govern the value of anything, whether it be commodities or money.

33. *Determination of value.*—How are values determined and what forces govern the fluctuations thereof? The statement of the older economists is: Value is determined by Cost of Production. A thing is worth what it costs to produce. The insufficiency of this explanation is apparent when we consider the great number of things whose value is widely different from or has no connection with its cost of production; land, for example, which has no cost of production, or buildings of unsuccessful enterprises which may sell for one-tenth of their cost.

34. *Utility theory of value.*—A modern theory holds that value is determined by "utility." Usefulness or desirability rather than cost is the quality which gives a thing power to exchange for other things. Usefulness, however, is a matter of personal estimate and varies infinitely with different individuals. Since "value" is expressed by the market price, and there can be but one market price for the same thing in one community under the same circumstances, the utility theorists were forced to find a utility which was usefulness to the whole community or a sort of average utility. This they named "marginal utility," and gave the world an ex-

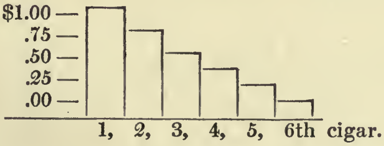
pression which has been found extremely useful. The term is coming into common use and is therefore worth understanding.

35. *Marginal utility.*—In a small city there might be one person who would be willing and able to give any amount up to $10,000 to possess a machine; there might be another whose limit is $9,500; and another at $9,000 and so on. As we go down, the number of possible purchasers increases so that there might be several hundred at a price between $500 and $1,000. This potential demand for automobiles might be represented by the following diagram:

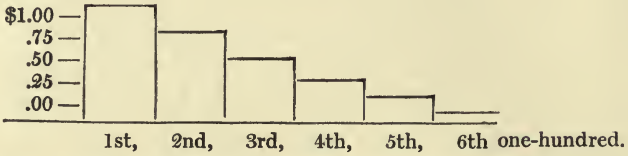


The height of the columns represents the money equivalent of the demand for automobiles, and the breadth of the columns represents the number of automobiles which would be bought at the different prices. Suppose under these conditions three cars were brought to that city for sale. The man A would pay $10,000 for one if he had to, but he knows there are three to be sold, so he refuses to pay as much as he would if there were only one for sale. To dispose of the three automobiles, the dealer must not demand more than $9,000; at that price A, B, and C will supply themselves and thus establish the market price in that city. The automobiles may not have cost more than $1,000 to produce, but that fact would have no weight in fixing the price. The price is determined by the "marginal utility," that is, by the utility of the automobile purchased by C, who is called the marginal purchaser. Margin means "edge" and C is the purchaser who is on the edge of the market. If there had been only two automobiles, he would not have been supplied; if there had been four instead of three for sale, the price would have had to be reduced to $8,500 and then D would have been the purchaser on the margin. This example is of course highly theoretical and would probably never happen in this way in real life, yet the principle is true and works out with greater precision, as there are a greater number of buyers and sellers, and as the knowledge of each others' real desires increases.

36. *Marginal utility to the individual.*—In the illustration we have assumed that each buyer desires but one unit of the article for sale. With many classes of goods, each buyer may desire more than one unit, cigars for instance. Some wealthy men might give a dollar if they had to for one cigar a day but they would not give so much for a second. From this fact we derive the "law of satiety," that every unit of a commodity consumed yields successively less satisfaction and has less utility to the consumer than its predecessor. The demand of any one consumer for units of a given commodity within a given period may be represented by the following diagram:



To make a chart showing the demand for cigars, it would be necessary to combine the charts representing the demand of each consumer. Suppose for the sake of simple illustration there were one hundred consumers of cigars in the market, each with a potential demand represented by the foregoing diagram, a chart showing the general demand would be thus:



Suppose the makers of this particular quality of cigar could make a fair profit by selling them at 25 cents. They would produce five hundred because they could find purchasers for that quality at 25 cents each. They could not get more because there can be but one price in the market, and the buyers assuming that they understand the situation, will pay no more than necessary. If the manufacturers make more then five hundred cigars and attempt to sell say five hundred and fifty, they would force the price below 25 cents and destroy their profit.

37. *Reconciliation of the two theories.*—It is easy to understand now why the value of anything that can be easily produced coincides with the cost of production. If the value is much above the cost there will be an abnormal profit in it, producers will be attracted to the business, the supply will be increased, and the price brought down by the competition of the sellers until it coincides with the cost. Conversely, if the value is below cost, the supply will be reduced on account of producers leaving the business and the price will rise to the cost. If the supply of the thing is fixed, the market price and cost of production may have no relation to each other.

CHAPTER IV

EVOLUTION OF THE MEDIUM OF EXCHANGE

38. *Primitive ideas of value.*—In the preceding chapter we have described how the necessity for the exchange of goods was first felt. Long before the rights of private property were recognized within the tribe, there was exchanging of articles, usually luxuries, or ornaments or goods of an ornamental character between the tribes; first in the nature of gifts, later growing into the regular systematic exchange. This trade was direct barter, no medium of exchange being used.

Later when private property rights became more definitely recognized within the tribe, intra-tribal exchange sprang up. The first articles of this traffic were the imported goods, to which a more definite value was ascribed, influenced by the limitations in the supply. It was most natural that these articles with their definite value should become the measure of the exchange value for the goods domestically exchanged, and thus we have the beginnings of the idea of a standard of value, still very crude and ill-defined but serving the purpose.

Furthermore these imported goods were as a rule highly desired by everyone, and were, therefore, much easier to dispose of in exchange for other things than domestic commodities. This gave to them an additional utility quite aside from their usefulness or their ability to satisfy the wants of their possessors. We call this utility, "exchange utility."

39. *Ornamental stones early used as money.*—Articles first used as money in any definite way of which we have knowledge were ornamental stones. An extravagant love for ornament is one of the most universal characteristics of savages. They are likely to estimate ornaments at a much higher value than the more necessary commodities. The utility of these ornamental stones or shells was so constant and universal that the demand for them was likely to be highly stable. The savage was quick to realize that if he could possess himself of a supply of these articles he had at his command the power to get anything else of which he might be in need. Hence these stones took on an additional function of a store of value, easily exchangeable for other values.

40. *Three functions of primitive money.*—Thus in the earliest form of money we have the three functions well developed, the function of Exchangeability, of a Measure of Value, and of a Store of Value. In all the more primitive nations this function of store of value was more important than in modern times. Jewish women of the Old Testament carried about their person their doweries in the form of ornaments and jewels. The East Indians of to-day convert their surplus wealth into silver and carry it about with them, not so much from an extravagant love of ornament as from the more practical motive of having always at hand the means of obtaining the necessary articles of livelihood. As we shall see later this custom is a very formidable obstacle in the path of economic development.

41. *Wampum.*—The American Indians were in this stage of cultural development when the American settlers first came in contact with them. They had eliminated all forms of ornamental money except wampum,

which consisted of strings of beads cut from shells. These beads were of two colors, white and black, the black being worth double the white. In trade with the Indians the settlers found it convenient to use wampum, and it therefore acquired a very definite value in the colonies. The colonies lacking a supply of gold and silver coins were compelled to make payments among themselves in wampum, and it was at one time receivable as legal tender for payment of debts to the amount of ten pounds sterling, or about $50. The disadvantages of this form of money were manifest when some clever but more unscrupulous Europeans invented a method of dyeing the white beads black and doubling their value by the operation. So difficult was it to detect this primitive counterfeiting that wampum soon came into discredit, and at length was discarded.

42. *Beaver skins.*—The next form of medium of exchange to be adopted for trading with the Indians had the merit of being impossible to counterfeit. The steady demand for beaver skins for manufacturing into hats in England gave them a very stable value among the colonists, and they early acquired the quality of exchangeability in addition to their ordinary utility. When a tribe passed from the hunting to the pastoral stage of cultural development, it was natural that they should adopt a commodity for money which existed in greater and more constant supply than the products of the chase. Thus we find among the ancient Hebrews and Arabs that cattle were used for the purpose. However, it is doubtful whether they attained any great circulation as a medium of exchange; it is more likely that they performed the function of a measure of value. In the book of Genesis we constantly read statements of the wealth of individuals as measured in the size of their

flocks and herds. The great disadvantage of the use of live stock as money arose from the considerable value in each indivisible unit and its perishability.

43. *Agricultural products as money.*—In the next stage of cultural progress, namely the agricultural, we find the products of the earth used as money. Grain, tobacco and rice formed the currencies of agricultural people. The disadvantage encountered in this variety of money was the uncertainty of the supply. In years of good crops, the value of the commodity would fall very low and vice versa in periods of scarcity. This instability of value was a great disadvantage in these currencies. Furthermore the fact of their rapid deterioration when stored was also against them. One of the most instructive experiments in currency was that of the early American colonists who in default of an inadequate supply of metallic money to which they were accustomed in England, were forced to make use of forms of currency belonging to much more primitive peoples. We have already spoken of wampum and beaver skins. The early settlers in Massachusetts and Virginia were in need of almost every kind of manufactured articles, and they were forced to import such merchandise from England. Unable to afford metallic money, they were compelled to pay for their imports with commodities salable in the European markets. For the Northern colonists, beaver skins furnished such a commodity, and since everybody wanted the English goods, the beaver skin was highly desired on account of its purchasing power.

44. *Tobacco.*—In the Virginia colonies, tobacco was the commodity most available for export to England. It is but natural that it should come to have an artificial value as a medium of exchange. The history of the

tobacco currency in Virginia reveals a great many of the principles underlying the science of money. The story is very well told by Mr. Horace White in his book, "Money and Banking":

> In 1642 an act was passed forbidding the making of contracts payable in money, thus virtually making tobacco the sole currency.
>
> The Act of 1642 was repealed in 1656, but nearly all the trading in the province continued to be done with tobacco as the medium of exchange.
>
> In 1628 the price of tobacco in silver had been 3s. 6d. per pound in Virginia. The cultivation increased so rapidly that in 1631 the price had fallen to 6d. In order to raise the price, steps were taken to restrict the amount grown and to improve the quality. The right to cultivate tobacco was restricted to 1500 plants per poll. Carpenters and other mechanics were not allowed to plant tobacco "or do any other work in the ground." These measures were ineffective. The price continued to fall. In 1639 it was only 3d. It was now enacted that half of the good and all of the bad should be destroyed, and that thereafter all creditors should accept 40 lb. for 100; that the crop of 1640 should not be sold for less than 12d., nor that in 1641 for less than 2s. per pound, under penalty of forfeiture of the whole crop. This law was ineffectual, as the previous ones had been, but it caused much injustice between debtors and creditors by impairing the obligation of existing contracts. In 1645 tobacco was worth only 1½d. and in 1655 only 1d. per pound.
>
> These events teach us that a commodity which is liable to great and sudden changes of supply is not a desirable one to be used as money.
>
> In the year 1666 a treaty was negotiated and ratified between the colonies of Maryland, Virginia, and Carolina, to stop planting tobacco for one year in order to raise the price. This temporary suspension of planting made necessary some other mode of paying debts. It was accordingly enacted that both public

dues and private debts falling due "in the vacant year from planting" might be paid in country produce at specified rates.

In 1683 an extraordinary series of occurrences grew out of the low price of tobacco. Many people signed petitions for a cessation of planting for one year for the purpose of increasing the price. As the request was not granted, they banded themselves together and went through the country destroying tobacco plants wherever found. The evil reached such proportions that in April, 1684, the Assembly passed a law declaring that these malefactors had passed beyond the bounds of riot, and that their aim was the subversion of the government. It was enacted that if any persons, to the number of eight or more, should go about destroying tobacco plants, they should be adjudged traitors and suffer death.

In 1727 tobacco notes were legalized. These were in the nature of certificates of deposit in government warehouses issued by official inspectors. They were declared by law current and payable for all tobacco debts within the warehouse district where they were issued. They supply an early example of the distinction between money on the one hand, and government notes, or bank notes, on the other. The tobacco in the warehouses was the real medium of exchange. The tobacco notes were orders payable to bearer for the delivery of this money. They were redeemable in tobacco of a particular grade, but not in any specified lots. Counterfeiting the notes was made a felony. In 1734 another variety of currency, called "crop notes," was introduced. These were issued for particular casks of tobacco, each cask being branded and the marks specified on the notes.

45. *Summary of principles.*—The experience of the world with these various commodities as currency has brought out some fundamental principles, which we have mentioned but which it would be well to summarize, as constant use must be made of them in stating the more complex phases of the subject. One of the most essential requirements for money as a medium of ex-

change is general acceptability. It is this quality which distinguishes the money commodity from all others. As a rule a commodity becomes more acceptable in exchange, the less its other utilities are considered, and the wider its use as a medium of exchange. This quality of acceptability depends either upon a well-established tradition or upon an ultimate market where it is esteemed for its want-satisfying power. Ornaments possessed this quality to a high degree because this human desire was almost universal among primitive peoples. In the case of beaver skins and wampum, the insatiable demand maintained their acceptability of exchange.

46. *Divisibility.*—It is highly desirable that the money commodity should be capable of division into small units in order to serve as a medium in small transactions. This quality of divisibility was absent in beaver skins and cattle. Commodities which contain small value in large bulk, which with the amount of them necessary to make even a very ordinary transaction represents so great a volume as to be difficult of transportation, are unsuited for the purpose of money. When the value of tobacco fell, the difficulty of transporting it added to its other disadvantages as money. The Chinese bronze coins of the present day, called "cash," occasion great inconvenience to travelers who must carry a moderate sum with them. Their bulk is so great that separate conveyances must be used, and it is only a question of time when they will be eliminated on account of their cumbersomeness.

47. *Uniformity.*—Uniformity is another highly necessary quality in money. When the estimates of value were only approximate it was not so necessary that the units of the currency should be uniform, but when the

exchanging became more general, the lack of uniformity in the units became a serious obstacle to their general acceptability. The lack of this very necessary quality made their values very indeterminate and uncertain. Beaver skins were unsuited for the purpose largely on this account. Tobacco was less so.

48. *Cognizability.*—Closely connected with the quality of uniformity is that of cognizability, that is, the possession of certain qualities which are distinctive and easily recognized, either on account of color, texture or weight. Wampum which possesses so many of the other qualities desirable in money failed in this important particular; they could be easily counterfeited. Lack of this quality of cognizability can be overcome by the use of some mark which is either difficult to counterfeit or which can be protected by severe penalties. The old laws which made counterfeiting a capital crime, punishable by death, were justified when the necessity for maintaining the quality of cognizability in the currency is appreciated. Most of the early currencies were unfitted for that use because of their liability to deterioration. A commodity which has this defect is unsuited as a store of value, and the moment the deterioration begins to take place, it loses the quality of acceptability.

49. *Stability of value.*—Most of these defects in money have been eliminated by the use of metallic coins, and later by the use of credit. There is one quality, however, which metallic currencies fail to possess, that is, stability of value. The whole question of the standards and the whole controversy over silver and gold arises out of this characteristic lack of stability of value, a principle which we shall discuss at length presently. The final result of this process of evolution in money, the gradual discredit of the unfit and the extension of the

use of commodities possessing more of these desirable qualities, was the universal use of the metals as money. Beginning with the commoner varieties of metals like bronze and iron in the form of the utensils which serve a useful purpose other than exchange, we may trace down the development to the coin which has no other purpose than to be used as a medium of exchange. Adam Smith speaks of a village in Scotland in his day where nails were used as money. The general use of bullets among the American pioneers in the chase and in warfare against the Indians made them good "change" in the early days of New England. In the histories of Greece, we read of the huge and heavy iron coins of Sparta, which survived beyond their time on account of the hostility of the Spartans to trade. They seemed purposely to have retained a most unsuitable form of money for the purpose of hindering exchange.

The developments of better methods in mining and smelting the commoner metals such as bronze, iron and tin made them unsuitable for the currencies in any form. Their defect was in their cumbersomeness and in the difficulty of carrying them about. The process of elimination began with the cheaper and the heavier metals, until at last the sole survivors were silver and gold, except for the very smallest of coins.

CHAPTER V

EVOLUTION OF THE STANDARD OF VALUE

50. *Metal standards the fittest to survive.*—The history of money has illustrated very faithfully the law of evolution and the survival of the fittest. After all the commodities mentioned in the preceding chapter had been tried and found wanting, the world finally settled upon silver and gold as the most suitable materials for money. In the first place they have always had a great attraction in the eyes of mankind for use as ornament because of their natural beauty. Their scarcity and the difficulty with which they are produced gives them a certain stability of value, which was wanting in most of the earlier forms. Either of the metals in its pure state is homogeneous and practically of one quality, so that every single quantity, no matter whether it is mined in the Klondike or in South Africa, is almost the same as any other for all practical purposes. Unless the metal is mixed with alloys, there is no uncertainty as to its quality.

51. *Good qualities.*—Both metals are fairly durable, although not so much so as iron. This defect is partially remedied by the mixing with gold or silver of some harder metal in manufacturing coins. Gold and silver may be divided into the smallest parts without sacrificing any of its value, thus fitting it for peculiar use in making transactions of varying magnitude. They have large value in small bulk, although the increasing cheapness of silver led to its partial discontinuance as a

money metal within recent years. These metals are peculiarly adapted to the process of coinage, and capable of being changed in form, size and shape without a specially difficult process of manufacturing.

To avoid the division of silver and gold into quantities so small as to be impracticable in handling, the baser metals are generally used for coins of minor value where the defect of small value in large bulk does not apply.

52. *Platinum unsuccessful as money.*—Of the more expensive metals platinum is the only one which has been tried as money. In 1828 the Russian Government, which owned the principal platinum mines, began to coin this metal into pieces of three, six and twelve rubles, a ruble being worth approximately 50 cents. Platinum has several qualities which fit it for use as money, particularly its durability and its great density, which makes it easily distinguishable on account of its weight. Furthermore it oxidizes very slowly. The experiment, however, revealed several fatal objections to its use as coin. There is no great amount of it in use in commerce, hence the value of it is likely to be very unstable. Because of its extremely high melting point, the cost of manufacturing the coins was very great, and it could not be easily converted from bullion to coin and from coin to bullion, a feature which renders gold and silver very suitable for money. These objections induced the Russian Government to abandon the experiment in 1845.

53. *Objections to gold and silver.*—Gold and silver in bullion form are by no means the ideal money. They are difficult to identify at sight without the use of tests, which are too elaborate for ordinary use, so that it is easy to counterfeit them. They also are affected by wear and the question of loss of weight in handling has

at times been a serious one. In recent times especially, their lack of stability of value has created monetary problems of a serious nature, as for instance the Free Silver agitation during the last quarter of the past century.

54. *Coinage.*—The first two defects named, i. e., the susceptibility to wear and counterfeiting, have been overcome to a certain extent by coinage. The first attempts at coinage were probably the simple stamping of a quantity of metal with a symbol or character, indicating its weight in order to avoid a repeated weighing.

To Pheidon, king of Argos, is generally attributed the first coinage of the modern form. He is reported to have stamped both copper and silver money in the Island of Ægina, in order to facilitate commerce; and having the word of authority from Mr. Grote we may rest assured as to the truth of the account.

55. *Names of coins.*—The name of the English unit of money—the pound sterling—clearly indicates that it was originally a pound weight of silver, just as the old French coin, livre (the French word for pound) meant a similar weight of silver. The symbols stamped upon some of the earliest coins indicated that they were the equivalent of some earlier standard, as for instance the ox stamped upon the Grecian coins pointed back to the use of cattle as the standard of value.

It was probably not long before this convenient method of stamping pieces of metal led to abuses. It is quite likely that the less scrupulous merchants placed the stamp upon smaller quantities of the metal or subtracted from the stamped pieces part of their substance. This practice soon made the stamp very unreliable. To circumvent this lucrative practice, the stamp upon the coin was elaborated to cover the whole face of the metal, so as to make difficult the abstraction of any portion of it, and besides to inscribe on the coin the name of the person certifying the weight. To prevent the wearing away of the metal, it became customary to mix in the coin some harder metal, called alloy. Again this convenient device was abused, and it was found profitable to introduce into the coin a greater amount of alloy than was customary. Thereupon it became necessary to indicate in some way the fineness of the metal.

56. *Requirements of good coinage.*—At this stage of coinage three considerations had to be observed: It was necessary that the stamp upon the coin should certify that there was a certain amount of metal of a certain fineness in the coin, that none of the metal had been abstracted after the stamping of the piece, that the device cover the whole face of the coin, that it was guaranteed by some reliable person, and that it should be difficult to counterfeit. The great advantage to commerce in having good coinage led to the gradual restriction of the right to coin money to a few reliable persons, and finally to the sovereign himself.

This restriction of coinage, however, did not eliminate the abuses which we have mentioned, for the royal authorities for many centuries made large profits by debasing the coinage, both by reducing the size of the coins and by increasing the amount of the alloy in them. This fact can be easily demonstrated by reference to the coins of to-day. The English pound sterling, which originally represented a pound of silver, finally came to represent about half that amount. The people became so accustomed to receiving coins according to their face and without reference to their weight that the debased coin of similar weight had the same purchasing power as ever. The needy monarch could melt up the old coins and recoin the metal into a considerably larger number of new pieces bearing the same name and thus increase the resources of his treasury at slight expense. This was equivalent to a tax upon the people, but it was so indirect that it passed without protest. Henry VIII of England distinguished himself by repeated indulgence in this profitable practice.

Fraudulent abrasion and clipping of coins were a great nuisance in the seventeenth century. The silver coins circulating in the American colonies were chiefly Spanish dollars—sometimes called "pieces-of-eight," being of the value of eight reals—and their fractions. They were brought in by trade with the West Indies. Some were coined in Spain and others in the Spanish-American colonies. At their best they were not uniform in either weight or fineness, and they had been much tampered with by sweating and clipping. The heavier ones were constantly culled out to make remittances abroad, since they were received in England by weight only. Those which remained in the colonies grew lighter and lighter, until, in 1652, the pieces in circulation had lost about one-fourth of their original weight.

57. *Standard of value.*—Up to this point we have studied the subject of metallic money from the standpoint of its function as a medium of exchange. The principal points involved have been the convenient size of the coin, its genuineness, accuracy, composition and weight. The question of the function of metallic money as a standard of value involves quite different principles.

By a standard of value we mean the use of a metal as a measure for the values of all other commodities. The one essential quality which fits a metal to be used as a standard is stability of value. Since value is the result of adjustment between supply and demand, it is obvious that our standard metal must not be subject to excessive fluctuations in either of these particulars. The principal monetary problems of the past century have arisen out of controversies regarding the standard.

In ancient times both gold and silver were used as a standard, and no difficulty arose therefrom, principally because there were no great changes in the supply of these metals and because trade was so poorly developed that divergencies in values were not important enough to create serious inconveniences. It is only in communities where industry and commerce are highly organized that small changes in the measure of value are noticeable. The case is similar to that of engineering; for example, in earlier times of cruder construction there was practically no need of very accurate measuring apparatus. Differences of a fraction of an inch or millimeter could be disregarded. With improved technique and finer problems, it is necessary to have the utmost accuracy in measurement. The standard of value is a measuring apparatus for values, and it is only under highly developed commercial conditions that minute accuracy is essential.

58. *Double standard possible until last century.*—During the Middle Ages, gold became so scarce that silver was practically the only coinage, and so the European nations were on a silver standard. The fall in the value of silver about the fifteenth century and on created a demand for coins of greater value in small bulk, and as there was a greater production of gold at this time, the use of gold coins together with the silver became more common.

It is impossible to understand the intricacies of the standard question until we know just how the values of the coins are determined. Both silver and gold are used to such an extent in the arts that their value is determined in large measure by the demand for them there in relation to the supply. The mints are always obliged to draw their supply of bullion from the open market, and unless they offer the market price they are unable to obtain any.

Suppose, for example, that the supply of silver gradually diminishes while the demand for it in the market is maintained. Naturally, the producers of silver will be able to obtain better terms for it than before. Jewelers and other persons wishing to use silver in their business will melt up silver coins instead of purchasing the bullion at the higher price in the coinage. Under these conditions, people would begin to discriminate between silver and gold coins, selling the silver coins to the jewelers at a slight premium which they would probably offer for them. The Government would be unable to get silver for coinage purposes unless they gave a much larger sum in gold for it, and if they simply gave back the silver in the form of coins, these coins would quickly retire from circulation.

59. *Gresham's Law.*—This principle is called Gresham's Law, named from an official in the reign of Queen Elizabeth, who first observed this tendency of people to discriminate between two coins of the same nominal value. The simplest statement of this law is that the cheaper money tends to drive out the dearer, that is to say, when the people for any reason begin to discriminate between two coinages, they will invariably pay out the inferior and will hoard the better, thus removing it from circulation.

The only remedy for this condition would be for the mints to constantly alter the amount of metal in the coins to correspond to their commodity value in the market. Gold and silver are so easily transported from one country to another that changes in their value at any particular place will quickly spread throughout the commercial world. For example, if a new silver mine is discovered in South America, the increased supply of silver at that place will lower its value; the producers will offer it on easier and easier terms in exchange for gold or anything else of value. Silver will again begin to be exported, for it commands a higher price abroad than it does at home, but the result of thus increasing the supply in other countries will lower its value there until a new equilibrium is established.

It is of course impossible for the mints to continually alter the quantity of metal in the coins to correspond to their market values. Even if they did so, the old coins in circulation would have a value either greater or less than their face, which would cause one or the other of them to retire from circulation.

60. *Mistakes of early legislators.*—This tendency of metals to fluctuate in value was not understood until recently, and the governments were constantly trying various expedients to force the circulation of both metals in the face of natural laws to the contrary. As is usual with legislators and officials who are dealing with a matter which they do not understand, they sought to deal with the symptoms rather than the cause of the trouble. To this end they passed laws forbidding trade in the precious metals. They placed obstacles in the way of export and import. They made melting the coins a criminal offense. As is usual with unscientific laws of this character, they were impossible of execution, and were constantly evaded.

61. *Experience of England with double standard.*—The true solution of these difficulties was first reached in England. This country had had her share of the loss and vexation due to changes of the ratio. She had also visited cruel punishments on individuals for melting and exporting the precious metals. All attempts to enforce these foolish laws were eventually abandoned, and it came to pass in the reign of Charles II that the guinea of gold, although proclaimed by royal authority to be the equivalent of 20s. in silver, passed in trade for 21s., and no attempt was made by the government to interfere. The guinea remained as a trade coin till the third year of George I (1717), when another proclamation was issued making it legally equal to 21s., at which figure the ratio to silver was about 15 1-5 to 1.

As gold was slightly overrated at the ratio of 15 1–5, there was a tendency to export silver; and for this purpose the full-weight coins were selected. So it came about in the course of half a century that the only silver coins remaining in circulation were those which had been much reduced in weight by abrasion or by fraudulent clipping. The evil became so intolerable that Parliament, in 1774, passed a law providing that silver coin should not be legal tender for more than £25 in one payment, except by weight at the rate of 5s. 2d. per ounce. It was enacted at the same time that gold coins deficient in weight should be called in and recoined, and that thereafter such coins, if under a certain weight, should not be legal tender at all. The restriction of the legal tender of silver was to continue two years. The expectation of Parliament was that some effectual and permanent steps would be taken to deal with the evil of light coins in that interval, but since nothing was done, the act of 1774 was renewed in 1776 for two years more. In 1778 it was renewed for seven years, and then by repeated renewals it was carried forward to 1798. Another clause was now added that no more silver should be coined at the mint for private persons.

62. *Adoption of single gold standard unintentional.* —The significance of this legislation was not perceived at the time. It had not been the intention of Parliament to establish the single gold standard. The question of standard was not under consideration at all. What Parliament did in 1774 was: (1) to put gold coin in a state of perfection by recoining the defective pieces and making light coins unavailable in payments thereafter; (2) to limit the legal-tender faculty of the silver money then in circulation. The mint was still open, and anybody could have silver bullion coined into money of full weight and full legal tender. But since silver was undervalued at the ratio of 15 1–5, nobody would take it to the mint. Thus all the conditions of the single gold standard were in practical operation without any fixed intention of Parliament to bring it about, or any knowledge that it had been done.

It was noticed, however, that the inconveniences of a shifting ratio had disappeared. There was plenty of gold money for large transactions and of silver money for small ones. Although the silver coins were deficient in weight, they answered the purposes of small change. After the experience of a quarter of a century, Parliament and people were convinced that the Act of 1774, although adopted as a temporary measure, ought to be made permanent. Accordingly it was made so in 1799.

Yet it was not until 1816 that the true philosophy of the step was well enough understood to secure its enactment into a settled law. In that year it was enacted that the gold coin of the realm, when of full weight, should be full legal tender and should be coined for private persons to any amount, and that silver coin should not be legal tender for more than 40s. in one payment, and should be coined only on government account and should be reduced in weight 6 per cent. This law, which established the single gold standard, remains in force to the present day.

It seems to be the singular good fortune of England to blunder upon or have thrust upon her good institutions which other countries acquire only after much conscious effort and perhaps revolution. Besides the gold standard a great many excellent features of government—the dual houses of Parliament, the responsibility of the Cabinet to the Commons, republican government under the form of a monarchy, etc., might be cited on this point.

63. *Mintage.*—The key to the understanding of the complex problems of the standards is a clear conception of the minting of coinage and of the influence of the mints upon values of the precious metals. A mint is a place where certain definite quantities of the precious metals are stamped with a device or inscription, indicating the exact quantity of metal in them. As before mentioned, the earliest inscriptions were literal statements of the weight of the metal contained therein; the English pound was a pound of silver, the English penny, a pennyweight of silver. The sole function of the mint was to put the metal into a form more convenient for circulation. It affected the value of the metals only so far as this stamping increased their utility as a medium of exchange and created an additional demand for them.

The precious metals have a market value exactly the same as any other commodities, and this market value fluctuates according to the laws of supply and demand. When there is only one metal in use as money, the fluctuations in its market value can be measured only by the rise and fall of values of other things. The name "dollar," "pound sterling," "franc," "mark," etc., are simply terms indicating weight, not value. The name "dollar" for example is merely another name for a certain definite weight of gold, i. e., 23.22 grains of pure gold. A confusion of thought arises because the values of everything else are indicated by comparison with the dollar of gold. Because the amount of gold in the dollar never changes except by legislative enactment, people come to think of the value of gold as being fixed and unchanging. In a later chapter on the relation between gold and prices, we shall work out this idea more exhaustively.

64. *Legal tender.*—In the Middle Ages when there were a great variety of coinages in concurrent circulation, it was necessary that there should be some understanding as to the relative values of this heterogenous coinage. Accordingly the duty was imposed upon the government of prescribing the value of all other coins in terms of some one particular domestic coin. These royal proclamations of the value of coins really had a force of legal tender enactments, because a creditor was compelled by courts to receive any of these coins at its posted value. Legal tender means any medium of exchange which may be tendered in payment of debt, and which must be received by the creditor whether he is willing or not.

It was observed early that there was a tendency for certain classes of coins at certain times to disappear from circulation. They were either hoarded or melted up for use in the manufacture of jewelry or plate or they were exported. In order to prevent this the mints frequently reduced the amount of metal in the coin or attempted to check the tendency by laws prohibiting exporting or melting of the coins. Only the former of these measures was efficacious in checking these tendencies. Before, however, the constant altering of the coinage induced great confusion in trade.

65. *History of coinage in the United States.*—The history of the coinage of gold and silver in the United States is one of the most instructive illustrations of the laws which govern the fluctuations in value of the precious metals. The first secretary of the treasury and of the Constitution was Alexander Hamilton, upon whom devolved the duty of creating a plan for a monetary and banking system for the new country. The medium of exchange in circulation at that time was principally Spanish and English silver coins, or paper money of the colonies. The power given to Congress by the Constitution of regulating the value of foreign coins was more important at that time because of the great variety in circulation. It was necessary to have some authoritative valuation in order that payments might be made without requiring the parties to come to agreement as to the precise means of payment.

66. *First ratio of silver to gold, 15:1.*—It was part of the plan of Hamilton to establish an United States mint, so that the country might be supplied with an adequate amount of United States coins in the shortest possible time, and thus do away with the confusion of the miscellaneous coinage. He thought it necessary to coin both gold and silver in order that this purpose might be consummated as rapidly as possible. He fixed upon the ratio of 15 to 1 as approximating most closely the mar-

ket values of the metals at that time. The unit of value, the dollar, was decided upon because of the familiarity of the people with the Spanish dollar, and their custom of quoting prices in that standard. The opening of the mints to the coinage of silver and gold at the ratio 15 to 1 meant the free coinage of both metals. The mint stood ready to accept gold and silver, to convert it into coins, and return these coins to the person bringing the metal, charging him a very small fee for the alloys used to harden the coins.

67. *Inaccuracy of the ratio and its effects.*—The plan did not work out as Hamilton had intended. In the first place the ratio of 15 to 1 had ceased to represent the market ratio, when the mint was finally ready for coinage about two or three years later. According to the great European authority on the market values of the precious metals, Soetbeer, the actual market ratios were as follows: 15.37 to 1 in 1794, 15.55 to 1 in 1795, 15.65 to 1 in 1796, 15.41 to 1 in 1797, 15.59 to 1 in 1798, 15.74 to 1 in 1799, 15.68 to 1 in 1800, 15.46 to 1 in 1801, and 15.26 to 1 in 1802. This change in the market ratio meant that silver had declined in value relative to gold.

Under these circumstances nobody would be so foolish as to take gold to the mint to be coined. It would be much more profitable to take that gold and purchase silver with it in the market, and then to take the silver to the mint and have it coined into more dollars than the gold would have made, and each capable of purchasing the same amount of commodities as a gold dollar. To make this proposition as clear as possible, let us take a concrete example.

Suppose a dealer in bullion has one pound of gold. If he wishes to convert it into a means of payment, he may do one of two things; first, he may take it to the mint and have it coined into approximately 250 dollars; second, he may exchange the gold bullion for silver bullion in the European market. If the market ratio happens to be 15½ at this time, he will get in exchange 15½ pounds of silver. This silver he may take to the mint and have it coined into approximately 260 dollars, each of which is just as good as any gold dollar for the purpose of trade. Under these circumstances, why should anybody take gold to the mint when there were always dealers who were eager to make the profit which could be had by purchasing his gold bullion for silver dollars, exporting the gold to buy foreign silver, and then having the imported silver coined in order to buy more gold bullion? Here we have an endless chain, automatically causing an export of gold and an import of silver. Under these circumstances no gold was coined, of course.

68. *Disappearance of the silver dollars.*—Hamilton's idea of supplying this new country with coins of its own mintage was further frustrated by another peculiar condition. It was very soon noticed that in spite of the coinage of silver dollars at the mint they did not seem to remain in circulation for long. Instead the old Spanish coinage continued to be the current money. Of these Spanish and other foreign coins, only those which were clipped and mutilated were current. Perfect coins were either soon reduced to this same condition or disappeared from circulation. The Spanish silver coins were at this time full legal tender along with the United States coins. In their perfect condition they were slightly heavier than the American coin. Both in this country and in the West Indies, with whom at that time we had a very extensive trade, both coins passed at their face value without any discrimination. Shrewd traders

found, however, that they could make a profit exporting the new United States silver dollars, exchanging them in the West Indies for the heavier Spanish dollars, melting these heavier dollars into bullion, bringing the bullion to the United States and having it coined into more than the original number of dollars.

When the officers of the mint discovered that the coinage of silver dollars was simply adding to the profit of these bullion dealers instead of supplying the country with currency, they suspended the coinage of the silver dollar in 1806. This unsatisfactory state of the metallic currency of the country was not so serious because of the almost universal use of paper money at that time.

Fluctuations of Market Ratio Between Gold and Silver.[1]

Year.	Ratio.	Year.	Ratio.	Year.	Ratio.
1803		1830	15.82	1858	15.38
to		1831	15.72	1859	15.19
1804	15.41	1832	15.73	1860	15.29
1805	15.79	1833	15.93	1861	15.26
1806	15.52	1834	15.73	1862	15.35
1807	15.43	1835	15.80	1863	15.37
1808	16.08	1836	15.72	1864	15.37
1809	15.96	1837	15.83	1865	15.44
1810	15.77	1838	15.85	1866	15.43
1811	15.53	1839		1867	15.57
1812	16.11	to		1868	15.59
1813	16.25	1840	15.62	1869	15.60
1814	15.04	1841	15.70	1870	15.57
1815	15.26	1842	15.87	1871	15.57
1816	15.28	1843	15.93	1872	15.65
1817	15.11	1844	15.85	1873	15.92
1818	15.35	1845	15.92	1874	16.17
1819	15.33	1846	15.90	1875	16.62
1820	15.62	1847	15.80	1876	17.77
1821	15.95	1848	15.85	1877	17.22
1822	15.80	1849	15.78	1878	17.92
1823	15.84	1850	15.70	1879	18.39
1824	15.82	1851	15.46	1880	18.04
1825	15.70	1852	15.59	1881	18.24
1826	15.76	1853	15.33	1882	18.25
1827	15.74	1854	15.33	1883	18.65
1828		1855	15.38	1884	18.63
to		1856	15.38	1885	19.39
1829	15.78	1857	15.27	1886	20.73

[1] Compiled by the Director of the United States Mint.

Year.	Ratio.	Year.	Ratio.	Year.	Ratio.
1887	21.13	1894	32.56	1901	34.68
1888	21.99	1895	31.60	1902	39.15
1889	22.09	1896	30.59	1903	38.10
1890	19.17	1897	34.20	1904	35.70
1891	20.92	1898	35.03	1905	33.87
1892	23.72	1899	34.36	1906	30.54
1893	26.49	1900	33.33		

69. *Change of ratio to 16:1.*—The monetary system was, therefore, on a strict silver basis during this period, all the gold having been exported, hoarded or diverted into the arts. In 1834, Congress, in an attempt to remedy the condition, reduced the weight of the gold dollar from 24.75 grains to 23.2 grains of pure gold. This represented a ratio of approximately 16 to 1. The commercial ratio in 1834 was 15.73 to 1, nor did it reach the mint ratio until forty years later. It was probably as nearly correct, however, as any arbitrary ratio which could have been settled upon.

It will be seen, in fact, in a subsequent chapter on "Bimetallism" how ineffectual any attempt must be to establish by enactment in a single country a ratio of value between two such commodities as gold and silver, which have universal utility and a world market. Just as gold was driven out of circulation when the ratio was too low, so after 1834 silver was driven out because it was too high. Silver was worth more as bullion than it was at the mint, and the country soon found itself on a gold basis. In 1834 the ratio was changed to 15.98 to 1, but the difference was so slight that it had little effect.

70. *Legal tender acts created a paper standard.*—Gold continued to be the standard until the legal tender acts of 1862–1863. The first of these acts, passed in February, 1862, authorized the issue of $150,000,000 of non-interest bearing United States notes, payable to

bearer. These notes were to be receivable for all dues to the Government and to be legal tender for all debts, public and private, within the United States. They were, furthermore, exchangeable for the 6 per cent twenty-year bonds of the United States at the option of the holder.

The first bill was followed six months later by a second measure authorizing $150,000,000 more notes, and in January, 1863, the total was increased to $400,000,000. Thus there was injected into the circulating medium of the country $400,000,000 of promissory notes, the early redemption of which at least depended on the success of the Federal army in the field and the reëstablishment of peace and order. In accordance with Gresham's Law, gold began to disappear from circulation after the first bill was passed, and prices were soon expressed entirely in terms of the new standard. The situation was further complicated in July, 1863, by the repeal of the provision for the exchange of the notes into United States bonds, and before the end of 1864 gold was quoted at 280 in the New York market. In other words, the "greenbacks" were worth but 35 cents on the dollar. It is obvious that the country was no longer on a gold basis. The unit of value was now the Government's promise to pay $1 in gold, a unit which fluctuated with the fortunes of war.

71. *Single gold standard after 1879.*—This condition lasted long after the conclusion of the war, but naturally as it became evident that the nation was to endure and the Government finances improved, the divergence between gold and the paper standard gradually decreased until it was completely destroyed when in January, 1879, the treasury offered to redeem its legal tender notes. In 1873 an act was passed which made gold the sole le-

gal standard. This act accomplished the demonetization of silver and was vigorously attacked by the friends of that metal.

In 1878 the treasury was authorized to purchase silver bullion for the purpose of coining it and in 1890 the Sherman Act authorized the purchase of silver by the issuing of legal tender notes. Neither case, however, represented a retreat from the gold standard because neither provided for the free coinage of silver. In spite of these efforts to remonetize silver and in spite of the even greater effort of the Silver Party to elect Mr. Bryan to the Presidency in 1896 on a double standard platform, gold has remained the single legal standard since the Act of 1873 and the actual standard since the redemption of specie payments in 1878.

72. *Act of 1900.*—In 1900 an act was passed authorizing the secretary of the treasury to maintain all forms of money issued or coined by the United States at a parity of value with the gold standard. How this was to be done, however, the act did not provide. Inasmuch as this binds the Government to receive both silver and greenbacks at par with gold in payment of dues to itself, it indirectly provides for their redemption. Although the act was a specific acknowledgment on the part of the Government of the intention to maintain this parity of value, it is to be regretted that some means of doing so in case of stress and decreased gold reserves was not provided.

73. *Summary.*—To sum up the evolution of the standard in the United States: From 1792 until 1873 the legal standard was a double one, gold and silver. The actual standard, however, during this period changed considerably. From 1792 until 1834 it was silver; from 1834 until 1862 it was gold. Then came

the legal tender acts, and greenbacks became the actual standard, to continue until 1879. In 1873 gold was made the single legal standard; and from the resumption of specie payment in 1879 it has been the actual standard as well.

CHAPTER VI

STANDARD OF DEFERRED PAYMENTS

74. *Defects of gold.*—The next function of money to be considered is its use as a standard of deferred payments. Obviously this differs from its function as a standard of value only because it introduces the time element.

For this purpose, also, gold is a defective standard, but it is by far the best that is known. Gold is durable. Once mined, it is added to the productions of the past, to remain always a part of the world's supply. For this reason the amount mined in any one year cannot bear large enough proportion to the total amount in existence to cause great changes in its value. Even with an annual production of $400,000,000 the amount in existence is so large that its value is much more stable than anything else which could be used for the purpose.

Although the same was formerly true of silver, its production has so greatly increased during the last thirty years that a single silver standard of deferred payments would be very unsatisfactory. In 1876 and 1890 to 1894 it fell 50 per cent. Changes as violent as this would not have taken place had not silver been demonetized in the United States and had not the nations of Europe also discarded it during the last half century. It is evident, however, that these fluctuations unfit silver to act as a standard of deferred payments.

We have already seen the impracticability of the double standard, but shall reserve that subject for more careful consideration in a subsequent chapter. In the absence of a better, we are therefore forced to the conclusion that gold is the best standard for deferred payments.

75. *Definition of deferred payments.*—Deferred payments are usually the result of contracts. When we stop to consider that contracts play a part in nearly all business transactions, the importance of the subject is appreciated. Our investments, bank deposits, notes, currency, in fact, a large proportion of our wealth consists of contracts. If economic prosperity is to continue, these contracts must be enforced. To this end the Constitution of the United States declares that "no state shall pass any law impairing the obligation of contracts."

Although the provision prevents the direct impairment of contracts, the same end may be accomplished indirectly by unwise monetary laws. Anything, in fact, that causes great changes in prices will alter the effect of contracts. Practically all contracts are payable in terms of dollars, and some of them run for long periods. In order to secure perfect justice between debtors and creditors it is necessary that the dollar should mean the same at the maturity as at the beginning of the contract.

Speaking accurately, this is impossible, for even when the contract is specifically made payable in gold, the purchasing power of that gold after a period of years may have changed considerably. Contracts payable in gold, however, have always been the most highly regarded, because no matter how distant the date of maturity it is generally felt that the value of gold will approximate its present value. The risk that it will be greater or less is only the ordinary business risk which every business man must take and for which he must make allowance in his calculations.

A great many contracts, however, are payable in terms of "dollars," without specifying the kind of dollar that is meant. While the statutes define a dollar as 23.22 grains of pure gold, yet debts may be legally paid by other forms of dollars. The law makes certain forms of currency legal tender in payment of debts. The silver dollar and the treasury notes are full legal tender. Greenbacks are full legal tender. National bank notes are legal tender in payment of any debt to a national bank and are receivable by the Government for all dues except duties or imports. Subsidiary silver is legal tender, but for convenience sake only to certain maximum amounts.

76. *Effect of legal tender laws.*—So long as all the forms of currency are interchangeable and of the same value, legal tender laws have no particular significance, but if some form of currency is depreciated it is obvious that no creditor will care to receive it and every debtor will want to pay in that form of currency. For instance, when the greenbacks depreciated to 35 cents on the dollar in 1864, they were still legal tender unless otherwise specified in the contract. No debtor would think of paying his debt in gold dollars because with 35 per cent of that amount of gold he could buy depreciated greenbacks that would fully satisfy the debt.

77. *Constitutionality of Legal Tender Acts.*—The right of the Government to pass the Legal Tender Acts was in fact declared unconstitutional by the Supreme Court because it violated the clause of the Constitution which forbade the impairment of the validity of contracts. This decision was reversed, however, by a sub-

sequent Supreme Court which declared the statute constitutional under the authority given to Congress to provide means for carrying on war.

Waiving the question of constitutionality of legal tender acts, it may be well to consider whether under any circumstances there is any advantage to be gained by adding the legal tender feature to the various forms of circulating media. Does the medium become more valuable because of the legal tender stamp? Obviously, if a country adopts the gold standard, making gold legal tender, it increases the value of gold somewhat because it increases the demand for it. But this is because gold is needed as a medium of exchange. The legal tender feature adds nothing because it will circulate at its actual metal value. When a country attaches the legal tender stamp to two metals we have already seen that the cheaper will drive out the dearer and that the cheaper metal will also circulate at its metal value.

In the case of the greenbacks the legal tender feature added nothing to their circulating power, as is shown by the fact that they fluctuated in value as the time of their redemption seemed early or remote. The legal tender feature, is, therefore, of value solely to the debtors, who can take advantage of laxity of their contracts to pay their debts in depreciated currency when they should pay in the standard metal. It adds little, therefore, to the circulating power of the medium to which it is attached, and what little it does add inures to the advantage of a single class.

The whole free silver agitation was an attempt to change the standard because it was believed that in regard to its use as a standard of deferred payments gold was defective. It is apparent that it is to the advantage of the debtor class to have a standard which is constantly depreciating in comparison with goods; in other words, that goods should be apparently rising in value.

78. *Debtor class injured by an appreciating standard.* —From 1860 to 1896 there was a large debtor class in the country composed of farmers who had gone West and purchased land on mortgage. These farmers bought the land agreeing to pay a certain price in the future and a certain rate of interest each year. This price and interest rate were based upon the value of crops, particularly wheat, which in the early 70's was worth as high as $2 per bushel. The price of wheat gradually declined until in 1894 it was worth less than 50 cents per bushel. The farmers found themselves unable to meet the interest payments, much less to provide for the paying off of the principal. They were told that this condition was due to the appreciation in the value of gold following the demonetization of silver in 1873. They were also told that if silver could be remonetized, that is, made the standard of value along with gold, that the quantity of standard money would be doubled, that the value of standard money would be reduced one-half and the value of everything else doubled. This debtor class composed the backbone of the Silver party in 1896. Fortunately before another election was held the question had been settled to the satisfaction of everybody by the unexpected increase in the production of gold.

CHAPTER VII

SUPPLY AND DEMAND IN RELATION TO MONEY

79. *Price.*—There is a distinction between the use of the words "value" and "price" which it is well to understand clearly. Value is the expression of a ratio of importance between two commodities. If, for example, one wishes to express his estimate of the worth of a pair of shoes it is necessary to make a comparison with some other commodity. Thus the value of a pair of shoes may be expressed as equal to two hats, or the ratio expressed is one to two.

Price is a ratio expressing a comparison of value, but one of the terms of the ratio is money. The use of a standard of value which is familiar to everybody enormously simplifies the expression of values. In order that price may have a clear and definite meaning it is necessary that the money standard fluctuate as little as possible. If, however, there is a change in the value of the standard, it alters the real meaning of every quoted price.

That the prices of goods depend quite as much upon the value of money as upon the value of the goods themselves, is a truth that the reader must fully grasp. It may be a little puzzling at first, for it is natural to think of money as a fixed and stable thing, with respect to which other things fluctuate. To many men the idea that money changes in value is as novel when first presented as the notion that the ocean changes its level. The reason for this misapprehension with regard to the value of money lies in the fact that men think of price as being identical with value, and since the "price" of gold (and of silver in a country where it is freely coined into money) never changes, it is assumed that the value of gold is unchanging. The common belief in the stability of money is analogous to the illusion existing among primitive peoples with regard to the solar system. They think the earth is stationary. It is their view point, and all changes on the screen of the firmament seem to them to reflect changes in the heavens, not in the position of the earth. The analogy, like all analogies, is imperfect, but it is suggestive. The fact that changes in price reflect changes in the value of money as well as changes in the values of goods is very important.[1]

Every man of business who buys and sells property has a deep interest in the fluctuation of prices. Most of them are thoroughly familiar with the causes which produce fluctuations so far as they are caused by influences affecting commodities. Only those who have made a special study of the subject comprehend the influence of the fluctuations of prices on the conditions affecting the money side of the ratio.

80. *Prices depend upon the money market.*—A long continued and steady rise of prices may take place in the face of conditions of supply and demand for commodities which would seem to warrant quite the opposite tendency. On the other hand there may be a very great fall of prices notwithstanding the fact that conditions of supply and demand for commodities justify higher prices. The explanation of this must be sought for in the money market.

The value of money as of everything else is the result of an equilibrium between supply and demand. How these forces produce the result so far as goods are concerned we have already seen in the chapter on value.

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[1] Johnson, "Money and Currency," p. 31.

The value of money is determined in the same way, but the conditions of supply and demand are so complex as to require a special study of them.

81. *Utility of money.*—Money is utility in the form of immediate universal acceptability. Its utility lies in its exchangeability in the same manner that nutrition is the basis of the utility of food. Money is demanded because of the need felt by men for this particular kind of utility. The name which we give to this conscious need of men for anything is "desire." The failure to distinguish between desire and demand has been a fertile source of error in economic thought. Some of the most eminent of earlier economists, observing that the desire for money was universal among men, concluded that therefore the demand for money was unlimited. If that were the case it would be absolutely impossible to analyze the forces determining the value of money. It would be the same as the attempt to find the point of equilibrium which would be the result of several physical forces if one of these forces was infinite.

82. *Distinction between desire and demand.*—Demand as used in an economic sense is "desire" backed up by the willingness to sacrifice or give up something in exchange. The only method we have of measuring demand is by the amount of value which will be sacrificed in order to obtain the object of the demand. The demand for money can be measured only by the amount of other valuable property which will be given in exchange for it.

Under the foregoing definition the demand for money is limited, definite, and liable to fluctuate from time to time. If a man offers $300 for a horse it is evident that his desire for the horse is greater than his desire for $300. The seller of the horse would desire the money more than the horse. The question of the demand for money may be reduced to this: Why do people desire money?

83. *Three varieties of money.*—In the first place it is necessary to distinguish between different varieties of money. There are three kinds of money: standard money, fiat money, and credit money. The demand for these different varieties is not uniform and under various circumstances shifts from one to the other.

Standard money or commodity money is some material which because of its proprietary qualifications has been adopted by any particular group of people as a common medium of exchange, as explained in the preceding chapter on the Evolution of Money. Its supply is regulated automatically, being dependent on the cost of production.

Fiat money is the medium of exchange, the value of which has no relation to the worth of the material composing it. Its value is derived from its utility as a medium of exchange. Its supply is regulated artificially by legislative enactment.

Credit money is simply a promise to pay the money which is in such form that it can be used as a medium of exchange. A promise to pay money by some responsible party may be just as valuable or even more valuable than the money itself if it serves the purpose of money.

84. *Fiat v. credit money.*—The distinction between fiat and credit money is an exceedingly difficult one to make in practice. In practically every case of fiat money, there is a promise either expressed or implied to pay the amount in standard money at some indefinite time; if not a promise at least an expectation or acceptance of the money in payment of taxes and other

sums due the government issuing it. It would be difficult indeed to imagine fiat money which the government itself would not accept in payment or which it never expected to redeem.

85. *Demand for money analyzed.*—The demand for money may be studied by analyzing the various forms of desire for money.

1. People desire money for the purpose of exchanging it for other commodities within a short time.

2. People desire money that they may have a store of value which for the time being is preferable to goods which have a (1) *direct* utility, i. e., those affording satisfaction by their use, or (2) *indirect* utility, i. e., the use of which produces more value, as in the case of all capital goods. In some rare instances the money is esteemed for itself alone without reference to its exchangeability, as in the case of a miser's hoard.

3. People desire money as a reserve basis for credit.

These three classifications cover all the desires for money and changes in the intensity of these desires have their effect on the value of money.

86. *Rapidity of circulation.*—The extent of the desire for money for the purpose of exchanging it for goods within a short time determines the rapidity of circulation. The measure of the rapidity of circulation of money is the form of exchanges, which is dependent upon four factors; 1. The number of population. 2. The production and distribution of wealth per capita. 3. The extent to which division of labor or specialization of employment prevails. 4. The extent of the integration of industry.

87. *Effect of population.*—Other things being equal, doubling the population would double the demand for a circulating medium. There would be twice as many

producers and twice as many consumers. Therefore it would require just twice as much money to circulate the goods required for their consumption. In a country of increasing population, therefore, there must be a proportionate increase in the quantity of money. Otherwise the increased demand upon the supply will tend to raise the value of money, bringing with it falling prices.

Even with a stationary population, advancing civilization inevitably brings an increase in the production and consumption of wealth, the circulation of which puts a greater demand upon money.

88. *Effect of division of labor.*—Along with the increased production of goods per capita comes the increasing division of labor. In fact, the greater specialization of employment is one of the most potent causes of increase of wealth. In primitive communities where the producer consumes a large part of his product there is little demand for money, not at all in proportion to the productivity of each man. Whenever men begin to confine themselves to fewer occupations, especially if at the same time the variety of their wants increases, they are under the necessity of obtaining their supplies by means of exchange, and this exchange requires a medium. Hence it is that division of labor requires an increase in the supply of money out of proportion to the increase of product per capita.

Opposed to this tendency and lessening somewhat the demand for money is the integration of industry. When a number of individuals or corporations engaged in the various processes of the manufacture of a line of goods combine so that the several processes are conducted under one ownership, the necessity for a large number of exchanges is eliminated. It may even go so far that no exchange takes place after the raw materials are purchased until the finished product is sold to the consumer.

89. *Special demand for gold.*—Under present conditions in this country all the forms of money described above perform the function of exchanging goods equally well, with possibly a slight advantage on the part of paper credit money on the score of convenience. In our trade with foreign countries, however, if there is a balance of imports over exports one way or the other which must be settled with money, there is only one form which will serve the purpose, i. e., gold. Increase of demand from this source, may under some circumstances tend to enhance the value of gold, independently of the value of the other forms. This phenomenon appears in the form of a premium on gold, of which we shall speak later.

90. *Payment of contracts.*—Another demand for money is in the payment of contracts. Unless there is a disparity in the value of the different forms of money the demand for money to liquidate contracts is likely to fall on all equally. Sometimes the demand for money for this purpose is artificially interfered with by the Government, as in the case of legal tender laws which force the creditor against his interest and inclination to accept certain forms of money such as the greenbacks. The tendency in such a case as this is to shift the demand from gold to credit or fiat money, and thus eliminate the disparity.

91. *Store of value.*—The demand for money as a store for value without the intention of exchanging it for goods within a short time depends largely upon the habits of the people and the stability of the Government. Money as a store for value is at a disadvantage when compared with productive property, and under

normal conditions prudent people will regard stores of money as very unprofitable investments.

92. *Insecurity of property and contracts.*—Under certain conditions, however, it may be advantageous to hold property in the form of money. In countries such as Turkey where the government is unable to protect property and where it is liable to heavy taxes or even to confiscation, the profit derived from the investment of money in productive enterprises, although very great, may be so risky and uncertain as to be unattractive. In such a country those citizens who are least protected by the government are inclined to safeguard their future welfare by hiding away their wealth in the form of money. The satisfaction they derive from the consciousness of being protected in their old age and being relieved from the fear of loss of property more than compensates them for the loss of even a large income. According to the extent to which property is protected and contracts are enforced as well as the amount of income that can be derived from investments, will the people of any country be disinclined to hoard accumulations of money.

93. *Special demand for money as a store of value.*—In every country, however, no matter how stable the conditions, there are times when money is more highly esteemed than any other form of property. When there is a prospect of falling prices of commodities it is advantageous to exchange property for money because the value of money rises in exact proportion as commodities fall. At the end of periods of prosperity when prices of all property have been inflated and there is a prospect that the culmination of the boom is approaching, this state of affairs is likely to be perceived suddenly by a large number of people, who at once become

eager to exchange their property into cash; the desire of a large number to sell at the same time of course brings a sudden fall in prices which we call a panic.

The converse of this takes place at the beginning of a boom period, when people realize that prices are too low and that purchases will yield large speculative profits. There is a rush to buy, that is to say, a desire to convert money which is about to fall in value into forms of property which will increase in value.

The desire to convert property into money is only one of the causes and symptoms of a panic. In a later chapter on credits a fuller discussion of this will be given. The liquidation of credits, either forced or voluntary, at the beginning of a panic accounts for a large part of the sudden demand for money and is the proximate cause for the liquidation of property.

94. *Hoarding.*—When the storing away of money becomes excessive we call it hoarding. It would be exceedingly difficult to attempt to draw the line where hoarding begins. The amount of money which prudent people will have ready for necessary purchases and the payment of debts will vary widely under different circumstances. In the panic of 1897 the country banks all over the country withdrew their deposits from the New York banks in order to be amply protected in case of large sudden demands from their depositors. A great many banks carried this practice to an unreasonable extent and filled their vaults with money for which they had no use and for which there was likely to be no use except in the case of most extraordinary disaster. Such storing away of money we can properly call hoarding.

95. *Decline of hoarding.*—Steady progress in the direction of improving the financial and banking sys-

tems and the widespread education of the people in the advantages of dealing with banks has diminished hoarding in this country until under normal conditions in the present era it is practically limited to persons in rural districts and to a few eccentric individuals who are willing to run the risk of robbery in order to enjoy the satisfaction of an occasional view of a pile of yellow coins or of green paper.

It is extremely easy, however, to frighten people out of their banking habits and cause them to revert to the more primitive methods. The failure of a prominent bank or the exposure of unsavory methods in high finance will induce a great many timid persons to withdraw their deposits from banks and stow away the money in safety deposit vaults or in some hiding place in their homes.

96. *Bank reserves not hoards.*—The enormous sums of money stored in the vaults of banking institutions are not hoards in the sense in which we are using the term. These dollars are really supporting the credit of the country, which as a substitute is doing the real money work. In fact, an idle dollar in the reserve backing up credit is really doing four or five times as much work as its brother in circulation. The full explanation of this point is deferred to the chapters on credit.

97. *Government hoarding.*—While the great sums of money in bank reserves are not hoards unless they should be excessive, there are at times huge amounts in the Government treasury and sub-treasuries which are really hoards. The law requires that $150,000,000 in gold shall be maintained in the treasury as reserve against the greenbacks outstanding. This sum is a true reserve and not at all a hoard. Furthermore, the gold and silver, both coin and bullion, which are held in the

treasuries and against which gold and silver certificates are circulating are not hoards. The paper money which represents them is doing the work by proxy. Unlike the bank reserve, however, which through its substitutes does four or five times the amount of money work, the gold and silver certificates do no more than gold and silver itself could have done. The only advantage derived from the system is the greater convenience and the saving of the wear and tear on the metal.

Another part of the money held by the Government represents a store of cash ready for future expenditures. This is the sum necessary to be kept on hand in order to provide for purchases within a short time, just as individuals find it necessary to keep a certain amount of cash on hand for the same purpose.

Any amount of money held in the treasury beyond the sums mentioned above is a hoard, representing purchasing power which is withheld from circulation and for the time being absolutely useless.

98. *Discrimination in demand for money.*—The different forms of demand for money which we have outlined above do not apply at all times equally to all the different varieties of money. There are sometimes circumstances when the demand falls upon one kind alone. So long as all the different forms are kept at parity the demand for a circulating medium to exchange goods or to liquidate debts is satisfied with either form. Then sometimes the question of convenience plays a part, as in the case of the silver dollar after the silver purchases in the 80's. These silver dollars refused to circulate in the quantities desired because the people had learned to prefer paper on the score of convenience. They would refuse to take them from the banks and would deposit them freely; the banks would turn them back

into the Government treasury in exchange for paper which their depositors demanded. The Government even went so far as to pay express charges to distant points in order to keep the silver dollars in circulation and finally the ingenious plan was hit upon of storing away the silver dollars and issuing in their stead silver certificates of one and two dollar denominations which were circulated in their place.

99. *Seasonal demand for money.*—For 90 per cent or more of the domestic exchanges no money is required at all, bank credit in the form of checks and drafts serving the purpose. This relieves the money of the country of most of the demand but there are circumstances when this bank credit fails to do its work. During the crop moving season in the South and West there is a demand for a medium of exchange which cannot be supplied by bank credit. Every autumn there is likely to be a demand for about $150,000,000 of extra money to finance the crop moving. This sum must ordinarily come out of the reserves of the banks, causing a contraction of credit, after credit has been expanded and giving rise to dangerous stringencies in the financial centers. This special seasonal demand for cash and the monetary problems which it occasions will be the subject of special discussion later in this volume.

100. *Demand for money in international trade.*—The exchanging of goods between this country and abroad requires the use of but a minimum of money; only the differences between the exports and imports are required to be settled in cash. The only possible form of money which can be used in making this international settlement of trade balances is gold. Sometimes the difference between the imports and exports is so great, or there has been so much international bor-

rowing that the resulting movement of gold in or out of the country is a question of extreme importance because of the effect it has upon bank or Government reserves and the maintenance of credit. It is this demand for gold to be used in making foreign settlements that accounts for the appearance of a premium on gold under certain circumstances. Whenever foreign banks find that they cannot exchange other forms of money for gold they are driven to procure it wherever they can by offering a premium for it.

101. *Premium on gold.*—Experience has shown that the appearance of a small premium on gold is attended by such serious disturbances in the credit situation of the country that such an event is to be avoided if possible. The seriousness of this matter led President Cleveland in 1894 to put out several issues of bonds and to deal with the syndicate of New York banks in order to prevent a premium on gold, or in other words to maintain a parity among all forms of money in the United States. The President did this in the face of popular disapproval by the mass of citizens who did not comprehend the necessity of these actions.

All forms of money (except national bank notes in national banks themselves) serve the purpose of bank reserves equally well, although gold is preferable because it assists the Government in supporting the circulating credit. It was proposed in recent currency bills to compel the banks to maintain their reserves in gold in order that there shall always be a satisfactory basis for the credit of the country.

102. *Uncertainty of the demand for money.*—The demand for money is a very uncertain quantity. The uncertainties of its substitute, credit, may cause very sudden and very great changes in the demand for money.

The growth of population increases specialization of employment and the increasing volume of industry per capita causes an increasing demand for a medium of exchange. On the other hand, however, the perfection of the credit machinery and the extension of banking facilities economize the use of money and lessen the demand. The suddenness with which any derangement of the financial machinery will cause a shift of demand from one form of money to another is one of the complexities of the subject.

103. *Supply of money.*—In contrast with the instability of the demand for money the supply of money is so stable as to give rise to the problem of "elastic currency." The only uncertain element in the supply is found in credit, which is a substitute for money and does the same kind of service.

104. *Varieties of United States money.*—In the United States at the present time there is in circulation, first, the United States notes or greenbacks. The supply of this form of money is absolutely unchanging, amounting to $346,000,000.

Second, the gold and silver certificates, representing actual metal deposited in the treasuries. The supply of these certificates varies with the amount of gold and silver deposited in Washington and the increase or decrease in their amount is offset by a correspondingly opposite change in the supply of metal money.

Third, National bank notes are somewhat elastic, but are so limited by the amount of bonds which banks can acquire to deposit as security for them that the supply can be regarded as fairly stable.

Fourth, The supply of silver coinage in the country is regulated by arbitrary action of the Government.

Outside the subsidiary coinage its use is so limited that it cannot be regarded as an elastic element.

Fifth, Gold is the only really elastic element in our country at the present time. The amount in the country for monetary purposes at any time is influenced by our financial and trade relations with foreign countries. In the chapter on foreign exchanges the causes of increase or decrease in the quantity of gold in the country is explained in all its details.

105. *Supply of gold.*—The quantity of gold actually produced in the country has very little effect upon the supply in that country. Gold is so easily transported that it equally distributes itself throughout the world according to the laws of the distribution of gold. The distribution of gold may well be illustrated by comparing it with water poured into one of a series of vessels connected by pipes. Water poured into one vessel distributes itself through all the connected series so that one level is maintained throughout the whole. If the pipes are small or clogged up there may be considerable delay in the distribution of the water. In the case of gold there may be for short periods of time inequalities in the distribution of gold which are to be accounted for by disturbances in the machinery of exchange; ultimately, however, gold will find its level throughout the world.

106. *Factors in the supply of gold.*—The supply of gold is determined by the same factors which determine the price of any other commodity. There is always a tendency for the supply to be increased so long as there is a profit in its production. If the cost of producing gold is considerably below its value there will be a strong inducement to enlarge the operation of mines and to

prospect for new mines. However, as the quantity of gold in circulation increases, the effect will be to raise prices as shall presently be explained. This rise of prices, affecting as it does all the implements and materials used in mining as well as the wages of the miners, increases the cost of production and thus diminishes the margin of profit made in the production and the value of gold until all the profit of mining may disappear in the mines which have the highest cost of production, causing them to shut down and cease contributing to the supply. In this way the production of gold is automatically regulated.

107. *Peculiarity of the supply of gold.*—There is a peculiarity in connection with the supply of gold which distinguishes it from any other commodity. The supply of a commodity may be considered as a sum of utilities which satisfy human want. The supply of wheat when analyzed means the number of units, each of which has a certain power to satisfy hunger. Two bushels of wheat have twice as much power in this respect as one.

In the case of gold, however, the utility consists of its power to exchange other commodities. Now there is no reason at all why one grain of metal might not do just as much work of exchanging commodities as one ounce. If the quantity of gold in the world is doubled at the same time that the prices of goods in general are doubled, the increased quantity of gold will do no more money work than the original amount, and the money supply of the world has not been increased at all when measured by its effectiveness.

108. *Historical illustrations.*—There have been three periods in history which illustrate this general proposition very clearly. The great increase in the amount of

silver in the world after the discovery of America and the opening up of South American and Mexican silver mines by the Spaniards in the sixteenth century caused a tremendous change of prices for every commodity. The discovery of gold in California and Australia in the middle of the nineteenth century was followed by a similar rise in general prices. At the present time we are undergoing a period of increased gold production, especially in South Africa and accompanying high prices.

In each of these periods the great enlargement of the stock of standard money in the world produced a profound social effect and radically altered the relations between debtors and creditors. The small quantity of money metal in existence before these discoveries were made would to-day do just as much work if there had been no increase, but the level of prices would be very low indeed. The value of the dollar would easily be ten times what it is to-day and 25 cents would be a fair day's wage for the unskilled workingman.

This ridiculously low level of prices, however, would not mean anything at all if all values were in the same proportion. If the necessities of life cost one-tenth of the price which we are paying to-day, 25 cents per day wages would be as satisfactory to the laborer as $2.50 is under present conditions.

109. *Temporary results of change of money supply.*—While it makes little difference whether the absolute price level is high or low so long as relative values are unchanged, yet changes in the price level are likely to have great economic results because the price of every commodity that is bought and sold does not change equally or simultaneously. Therefore a change in the general price level is likely to cause a general change in

the relative values. Especially is this true of credits. If a debtor has promised to pay a creditor $100 in ten years, and if within that period prices have changed so that the $100 at maturity represents the equivalent of only half the quantity of goods, the creditor has in reality received only half as much in value as he loaned. The fact that he received the same number of dollars does not mean anything because the dollars to him are valuable only as he can exchange them for things that he wants.

110. *Effect of increased supply of gold traced out.*—The principles which have been stated above will be better understood if we examine the effect of the addition of a certain quantity of gold to the stock already on hand. Let us follow the output of a mine and trace out the ultimate effects of the new gold.

When the gold has been refined and made into bricks it is sent to a Government assay office, where it is tested to determine its purity, and then turned over to the mint. Theoretically, under a system based on the free coinage of gold anybody can take the metal to the mint with the proper amount of alloy needed to harden it for purposes of circulation and can have it transformed into coins. Practically, however, the gold bricks are taken to the mint, but instead of waiting until the gold has been made into coins the owner receives at once the money equivalent for its value. The person who brought the gold to the mint now has the coins or their equivalent in some other form. He will either spend this money or deposit it in a bank. If he goes into the market to purchase goods of any sort his buying will have the effect of bidding up prices proportionately and the gold which was mined will be responsible for whatever effect has been produced on prices. The merchant who received the money uses it to replenish his stock and his buying will tend to raise the prices of his purchases.

As the money circulates from hand to hand, at every exchange it will tend to raise prices. This continuous process of price raising, spreading through all the different markets, would seem to have no end. It would seem that if we took one dollar and gave it time and rapidity of circulation enough it might raise the general price level to any height.

111. *Limit to the price-raising effect of gold.*—This *reductio ad absurdum* is answered by another proposition which counteracts it. Every rise of price reduces the purchasing value of the dollar, so that as the dollar continues to circulate it lose its power to exchange goods in the exact proportion as they have risen, so that if we conceive prices to have exactly doubled it will require $2.00 to exchange them where it only required one before. The result will be that there will be an equilibrium of prices established at a higher level than before the increase in the quantity of money.

If the quantity of money should be diminished in amount, or if the quantity of goods to be exchanged should be doubled, there would be a lowering of prices to correspond on account of the increase in the offering of goods for sale without the corresponding amount of bidding from the owners of cash to pay for them. The result would be the formation of a new level of prices at a point where the offerings of goods and the bidding of the holders of cash would balance.

112. *Alternative uses of new gold.*—If the miner who has increased the money supply of the country with the product of his mine should choose to hold the gold coins or the paper money equivalent for the gold, there

would be no effect whatever on prices, and it would be as though he had stored away the gold bricks or had never produced the gold at all.

However, if he deposits it in the bank its effect there will be to increase the loaning power of the bank and thereby to increase the purchasing power of the borrowers of the bank and thus affect prices even more.

113. *Widespread effect of new gold.*—An increase of prices on account of any large addition to the money supply would have more than local effect. We have seen how purchases from the retail dealers would tend to increase wholesale prices in the central markets on account of the additional purchases of the retailer to replenish his stock. In the same way the influence would extend from the central markets to the producing centers in this country and abroad. The demand for imported goods would be increased and unless our exports happened to increase at the same time the result would be an export of gold to foreign countries. If the general price level was raised in this country there would be an increased profit in importing goods, and a corresponding decrease of profit in exporting them, until, if the gold production or other increase in the supply of money was great enough, there might be no exports at all and we might be forced to settle for all our imports with gold.

Following out this principle we may conclude that the only advantage which a country derives from a large production of gold is simply that it is the first to feel the effect on prices; it cannot expect to retain permanently any more than its proper share of the new gold so long as trade is free between it and foreign countries. It would be impossible to increase permanently the supply of gold in this country without giving the other countries their proper proportionate share of it unless we used it as a substitute for other forms of money which were retired from circulation to make a place for it.

114. *Comparison of effect of increase of supply of gold and paper money.*—Following out this principle further in connection with fiat and credit money it will appear that it is impossible for a country to increase its supply of these forms of money and keep them at a parity with gold unless there has been an increase in the demand for money due to enlarged volume of business, increased population, etc.

Suppose the Government were to issue $500,000,000 new United States notes in addition to the $346,000,000 already outstanding in circulation. Suppose these notes were paid out by the Government for extraordinary expenditures occasioned by some great public enterprise, such as the building of a canal or for materials to carry on a war. These notes would go into circulation and cause the same rise in prices as an equal output of gold. The higher prices would attract imports and discourage exports and there would be credited against us a debit balance which would have to be settled in gold sooner or later. In this way the issue of notes would continue to drive gold out of the country by attracting into the country an equivalent amount of goods from foreign countries until a new equilibrium of prices throughout the world were established. When so much gold has been driven out that it becomes difficult for the bankers to find gold for export, the Government would probably be unable to maintain the new notes on a par with gold, and there would appear all the phenomena which accompany a depreciated currency, about which we shall have much to say in a later chapter.

115. *How much money is needed in a country?*—Fifteen years ago we heard a great deal in this country about the scarcity of money, and one of the strongest arguments of the Silver Party was that the country needed more money to do business properly. They said that goods were unsalable because there was not the money to purchase them. If the principles which we have worked out above are true, it would be of no use whatever to increase the quantity of money in the country because if we increased the amount we should diminish its exchanging power proportionately and the net result would be that our $2.00 would do no more work than the $1.00 did before. We might even go so far as to say that a country always has enough money to take care of its business needs; however, such a statement would be misleading if we did not take into consideration the effect of fluctuating prices upon industry.

The real difficulty of which the silver reformers complained was not the insufficient quantity of money, but the low level of commodity prices. They pointed to the western farmer, who was compelled to accept less than fifty cents a bushel for his wheat. There was plenty of money in the country to pay for the wheat and the farmer was really complaining because of the low price rather than because of the lack of a market for the wheat. If everything the farmer had to purchase with the proceeds of his crops—supplies for the family, wages of his hired labor, taxes, interest and principal on borrowed money, were diminished proportionately, he would have had no reason to complain. The trouble was that the prices of these things did not diminish proportionately with the price of wheat. In the course of time values would adjust themselves in the same proportions as before.

116. *Price changes not synchronous.*—In the long run the quantity of money has little effect in altering relative values; for a short period of time, however, it has a very great effect. The reason of this is that some commodities are very susceptible to money influences and respond quickly to changes in the money supply, while others respond very slowly. Stocks and the speculative commodities, such as wheat, cotton, copper, iron, etc., are very easily and quickly influenced; wholesale prices probably feel the effect much sooner than retail prices, in which the influence of custom plays a greater part. Wages feel the change considerably later, so that during a general rise of prices the workingman is at a disadvantage in having to pay more for the food and other necessities before his wages are increased correspondingly. Contracts for the payment of money increase not at all.

The question of the supply of money is an extremely vital one because of its bearing upon our business relations due to the variation in the response of various values to the change in the quantity of money. Changes in the supply of money alter the relation of one class to their advantage and to the disadvantage of another class. An increase in the supply of money puts creditors at a disadvantage and favors debtors; it increases the profits of the producers of raw materials at the expense of the wage earners, more especially to the disadvantage of the recipients of fixed incomes.

117. *Stimulating effect of rising prices.*—There is one effect of increased money supply, the benefit of which has no corresponding disadvantage for the time being. Rising prices of commodities stimulate industry and increase the demand for labor for the materials which enter into capital goods. This increase in indus-

trial activity leads to the greater production of wealth in the form of consumption goods and means a greater per capita distribution. Therefore, economists have concluded that a condition of gradually increasing prices is the ideal one for any community and since it is within the power of a community through the agency of Government to regulate the rise and fall of prices through the manipulation of the supply of money, it is possible to make great economic improvements by this means, as we shall discover in a more detailed examination later.

118. *Reaction.*—There is as much to fear from rising as from falling prices if the tendency toward higher price levels is allowed to run into speculation, the overexpansion of credit and the inevitable collapse which follows. Whether it is possible for a Government to so regulate the rise of prices through the manipulation of the supply of money that the evil consequences can be avoided is a matter which may one day become of great importance, especially if the unregulated production of gold should go on increasing at too great a rate.

In the present chapter we have seen that the value of gold and conversely the general level of prices is determined by the supply of and demand for money. The value of money at any particular moment represents the equilibrium between these two forces. Each of the forces, however, is composed of a great number of tendencies. Sometimes there may be a particularly large demand for gold in order to exchange a large volume of produce, while at the same time the demand for gold as a store of value may decline; the force of demand therefore is the final result of a number of tendencies and countertendencies.

119. *Swings of prices.*—An estimation of the strength of the demand for money at any particular

cycles

time or a prediction as to a future demand is facilitated by the fact that the changes occur, not abruptly, but in great swings. These great swings in the value of gold are simply manifestations of that great law of nature by which all progress occurs rhythmically and not steadily in any given direction. The course of prices on the stock exchange, the recurring periods of depression and prosperity, the great cycles of rainfall, are examples of this great natural law which is found to prevail generally throughout the universe.

120. *Cumulative effect of economic forces.*—The explanation of these great economic swings of prices and values is to be found in the cumulative effect of the economic forces. We are all familiar with the general pessimism that hangs like a cloud over the community during an economic depression. The obvious fact that the existing supply of goods is steadily diminishing, that the savings deposits of the people are increasing in amount in consequence of the hard lesson of thrift which the people have learned in the hard times, in spite of the steady deterioration in the industrial equipment of the country, the wearing out of the rails and rolling stock of the railroads—all these factors instead of inspiring confidence for the future among business men are even used as an argument for continued hard times.

When the inevitable demand for goods which has temporarily been delayed finally begins to assert itself, at first slowly, the business community gradually begins to hope that prosperity is returning. As the prosperity continues the cumulative effect of returning confidence makes itself felt in increasing prices, and since increasing prices mean larger profits to anybody owning any kind of property except money itself, there arises an enormous demand for income yielding property of all sorts, even that which promises to return only a speculative profit.

When industry is at its height and prices have been put to record breaking levels everybody is optimistic and hopeful of still better conditions. It is at a time like this that the careful observer will note that the production of both consumption and production goods has increased tremendously and will likely soon surpass the needs of the community. He will note that the higher prices go the smaller is the prospect of still further advance and the greater the prospect of a recession to lower levels. He will note that the rate of interest is very high, indicating a scarcity in the supply of loanable funds. His conclusion from this state of affairs will be that in the near future there must inevitably be a greater demand for money and a consequent increase in its value. He also will remember from previous experience that the cumulative effect of human cupidity and optimism which has carried prices to abnormally high levels will have exactly the reverse effect when it is turned in the opposite direction. When the turn comes and the downward tendency begins a corresponding scramble to dispose of goods and to get money in order to realize the increase in value will set in.

These great swings in prices offer an explanation of the fact that for long periods of time an increased demand for money has seemed to be accompanied by a fall in value of money instead of a rise. The natural effect of demand in this case is simply suspended for the time being, but when it again asserts itself it will do so with far more than the ordinary consequences and values will be carried much lower than they otherwise would be.

CHAPTER VIII

THEORY OF PRICES

121. *"Short" sales of money.*—Every buyer and seller whatsoever is a speculator in money, though he may not realize it. Every debtor and creditor is not only a speculator in money but he is a speculator in "futures." Every debtor has sold money short in exactly the same way as a speculator on the board of trade has sold wheat short when he has contracted to deliver a certain number of bushels at a given price at a future time. He gains or loses as the price at that time of delivery has fallen or risen.

It is an axiom in the speculative markets that there is no better guaranty for the maintenance of prices than the existence of a large short interest, the reason being that those persons are potential purchasers who must buy within a given time whether they wish to do so or not. Thus in times of credit expansion when people are going into debt in order to extend their business or for the purpose of buying something which they hope to sell at a higher price later, a large short interest in money is being created and as the time of maturity approaches it is inevitable that there must occur a scramble for money with which to satisfy the credit contracts.

122. *"Squeezing the shorts."*—When the credit expansion has extended to an extraordinary degree there are not lacking shrewd bankers and experts in finance who realize the approaching demand for money before the ordinary business community; these men quietly ac-

cumulate a store of funds. They may do this to such an extent that there suddenly develops a condition which might almost be called a corner in money and a squeezing of shorts follows. This process of "squeezing" the money shorts is more familiar under the name of a money panic.

A man who finds himself obliged to make a payment at a certain time has a choice of one of two courses; he may either borrow or he may sell something he possesses in order to provide himself with funds. In a severe money panic it is practically impossible to borrow money, even upon the most select collateral, and there have been days on the stock exchange when call money ran as high as 186 per cent per annum.

123. *Forced selling.*—Under such conditions the only recourse of the debtor is to sell whatever property he possesses at the best price obtainable. This sudden pressure of selling upon a market which is disinclined to buy will permit prices to descend to a level which would have seemed absolutely ridiculous a few months previous. There are not wanting at such times shrewd people who realize that there are extraordinary bargains to be found, but it is only a few of these shrewd people who have the means to buy at such times. The great majority of people, however, do not recognize these bargains, even if they have the funds; and instead of buying in a market which offers them a practical certainty of an increase of 25 to 100 per cent on their investment, they prefer to keep it stored away until the stringency as well as the bargains have become a thing of the past.

124. *People becoming better educated.*—There is evidence, however, in the panic of 1907 that the people in general are learning to take advantage of the occasional opportunities which these great swings of prices offer

them. The books of the great corporations such as the United States Steel Corporation, the Pennsylvania Railroad and hundreds of others, show a great increase in the number of stockholders after October, 1907. This is a most hopeful sign that in the future as the people become better educated in financial affairs the fluctuations in values will become less and less pronounced. It would be impossible to overestimate the great effect in this direction which the recent large output of literature on financial subjects has brought about.

125. *General price level.*—Whenever we have spoken of the effect of changes in the value of money on prices we have always spoken of it as a change in the "general price level." The rising or falling of prices due to a change in the money supply or demand is slow and gradual, while the changes in prices due to causes affecting the supply and demand for goods may be sharp and sudden. Furthermore, the prices of some goods may be rising while the prices of others are falling.

126. *Price tables.*—In the first place, therefore, it is necessary in estimating the effect of money to eliminate all those causes which account for changes in the prices of goods. In order to observe the changes in the general price level price tables have been constructed. The ideal price table would of course represent the average price changes of all the commodities, the exchange of which creates a demand for money. Since this is impossible the most practical method is to take a certain number of representative commodities.

127. *Many commodities.*—Such a table must not be confined to a few commodities nor to one class, because there might be special causes for an advance of prices of that particular class. An instance of this would be in commodities representing natural resources and raw

materials. A price table composed of wheat, corn, lumber, coal, cotton, would show a rise in price in the last ten years much greater than could be attributed to any change in the value of money. The reason for such a change would be the increase of population relative to the supply of natural resources or the area of land producing them.

On the other hand, if we made a price table composed of solely such articles as silk cloth, watches, articles manufactured from fine metals, etc., we should find that the average price had probably fallen within the last ten years, the reason being that with the improvement in labor-saving machinery and the greater skill of modern workmen the cost of production was considerably diminished, so that the fall in price would more than offset any diminution in the value of money.

128. *Example of price table.*—It is therefore clear that a price table should be composed of such a variety of commodities that the influences affecting the value of the particular classes will counterbalance each other. The proposition has been stated above that a general rise of values is absolutely impossible in the nature of things, since value is a ratio, and it is impossible to alter the relation of things by equal changes on each side. We give below a sample in outline of a price table constructed to show the price changes over a period of two years:

	1890	%	1892	%
Wheat	$ 1.00	100	$ 1.10	110
Cattle	50.00	100	60.00	120
Knives	20.00	100	15.00	75
Silk cloth	150.00	100	120.00	80
	4)	400		385
		100		96–¼

In this table we have made a hypothetical list of the prices in 1890 and another for the year 1892. These prices should preferably represent an average for a period of time in order to avoid any accidental fluctuations due to the season or other temporary causes. The prices for 1890 have been made the basis at 100 per cent and the increase or decrease calculated with reference to this base. This table will show that while some prices have advanced others have fallen so that the general level is diminished 3¾ per cent.

129. *"Weighting" of price tables.*—It may be objected that in this table we have given exactly as much importance to knives as we have to wheat, whereas we know that a change of a cent a bushel in wheat would have vastly greater effect on the demand for money than a change of 100 per cent in the value of knives. To correct this difficulty a system has been devised for "weighting" the various items in a price table. The principle of "weighting" is to find some basis of estimating the amount of the particular items and exchange either on the basis of total production or consumption.

To weight our price table above it would be necessary to arrange the four items so that wheat would have an influence on the result let us say one hundred times as great as knives; that cattle would have an importance fifty times as great as knives; that silk cloth has an importance say ten times as great as knives. The table modified to conform to this weighting arrangement is given below:

		1890		1892	
Wheat	100 ×	$ 1.00 =	10000	$ 1.10 =	110000
Cattle	50 ×	50.00 =	5000	60.00 =	6000
Knives	1 ×	20.00 =	100	15.00 =	75
Silk cloth	10 ×	150.00 =	1000	120.00 =	800
	161		16100		17875
			100%		111 4–161%

While the weighting of the price table seems to produce a very great effect upon our sample table, yet in making actual tables where the number of commodities is much greater the differences shown by simple and weighted price tables are very slight, and since the total result of any price table is but an approximation, it is doubtful whether the weighted price tables are more nearly accurate than the simple price tables.

130. *Advantages of weighting.*—The principle of weighting is important when changes in the price level for certain purposes are desired. For instance, if we desire to know whether the average cost of living for the workingman's family has increased or decreased, the price table should not only show the items which enter into the consumption of the family but they should be weighted to show their importance in the family budget. Tables constructed upon this principle were prepared by Professor Falkner in the most elaborate investigation of prices that has ever been undertaken in this country. The report was prepared for a Committee of the Senate.[1]

131. *Falkner price table.*—For this table lists of prices of 90 commodities were covered from 1840 to 1891; and 223 commodities were covered for the period from 1860 to 1891. The investigation was conducted with great care and expense, the prices being ascertained from an examination of merchants' accounts. Several tables were prepared from this data which are reproduced herewith. In the first table the average percentage of prices for various groups of commodities is given separately, the year 1860 being taken as a basis, or 100 per cent. The average prices of all the com-

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[1] Report by Senator Aldrich for the Committee on Finance, March 3, 1893, Senate Document, 52nd Congress, second Session, No. 1394, "Wholesale Prices, Wages and Transportation."

modities taken had decreased to 92.2 per cent in 1891, an average of 7.8 per cent.

FALKNER PRICE TABLE

Year	Food	Cloths and Clothing	Food and Lighting	Metals and Implements	Lumber and Building Materials	Drugs and Chemicals	House Furnishing Goods	Miscellaneous	All Articles
1840	96.6	110.7	395.8	123.5	110.0	145.8	116.4	147.1	116.8
1841	94.4	113.4	208.9	123.7	111.8	141.3	116.4	147.1	115.8
1842	82.9	100.9	202.0	118.7	108.8	131.6	116.4	170.6	107.8
1843	79.3	99.9	187.5	114.7	105.4	121.4	100.3	123.5	101.5
1844	81.6	105.0	119.7	133.3	103.0	119.7	102.3	129.5	101.9
1845	87.3	97.1	239.6	110.8	106.7	121.0	102.3	114.8	102.8
1846	94.6	95.3	143.8	116.9	106.2	123.9	111.0	111.0	106.4
1847	94.7	97.6	110.7	120.6	108.2	112.5	120.3	121.7	106.5
1848	83.5	87.5	106.1	119.7	105.3	113.0	121.7	125.6	101.4
1849	79.0	82.2	100.0	124.9	97.6	111.0	120.5	109.8	98.7
1850	85.5	91.3	102.6	114.8	102.2	123.6	125.6	107.7	102.3
1851	90.6	94.7	97.3	119.2	97.2	125.8	120.0	102.7	105.9
1852	88.7	88.7	93.5	117.7	100.4	111.8	111.9	100.5	102.7
1853	101.2	98.6	101.6	122.8	103.2	107.0	118.7	109.2	109.1
1854	105.9	97.4	106.8	125.6	114.1	110.7	121.2	108.4	112.9
1855	111.8	94.7	121.1	117.8	103.4	129.2	121.2	115.2	113.1
1856	110.4	100.6	126.4	115.3	102.8	135.5	115.5	121.6	113.2
1857	117.5	106.0	113.3	110.4	105.0	126.8	116.8	110.0	112.5
1858	94.6	98.0	111.4	101.3	103.8	116.0	108.7	97.1	101.8
1859	98.8	101.1	98.8	100.1	98.7	104.2	103.2	100.8	100.2
1860	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1861	95.8	94.9	103.5	102.5	108.9	101.3	96.8	100.7	100.6
1862	110.4	124.1	97.2	117.2	149.2	116.4	89.5	103.7	117.8
1863	133.0	191.6	107.1	140.0	177.1	146.5	123.1	129.1	148.6
1864	165.8	260.7	180.2	179.8	221.3	170.3	164.6	154.4	190.5
1865	216.5	299.2	237.8	191.4	182.1	271.6	181.1	202.8	216.8
1866	173.8	226.6	280.5	171.1	186.9	230.2	185.3	171.0	191.0
1867	163.9	179.9	196.3	161.3	178.8	211.2	159.1	161.4	172.2
1868	164.2	146.8	218.7	150.5	174.3	177.9	134.9	164.1	160.5
1869	162.9	147.5	206.8	141.3	165.9	160.9	120.7	162.3	153.5
1870	153.8	139.4	196.5	127.8	148.3	149.6	121.6	148.7	142.3
1871	169.3	133.3	144.1	122.2	151.4	139.4	128.5	148.8	136.0
1872	133.3	143.0	149.2	128.0	166.9	134.0	123.2	132.7	138.8
1873	129.8	136.9	134.6	129.8	171.9	141.5	109.1	134.4	137.5
1874	131.5	127.9	149.6	121.1	154.9	146.8	109.5	129.8	133.0
1875	130.5	120.1	156.5	117.5	143.7	144.2	95.0	122.9	127.6
1876	123.1	107.5	144.6	108.4	137.3	121.8	87.2	114.2	118.2
1877	120.3	101.8	108.0	100.0	125.8	122.3	79.0	118.2	110.9
1878	107.0	93.2	93.0	92.1	116.8	114.2	74.3	111.7	101.3
1879	97.6	91.1	95.3	88.4	115.1	110.9	68.6	102.1	96.6

Year	Food	Cloths and Clothing	Food and Lighting	Metals and Implements	Lumber and Building Materials	Drugs and Chemicals	House Furnishing Goods	Miscellaneous	All Articles
1880	107.6	104.5	100.2	96.3	130.9	113.1	85.2	109.8	106.9
1881	110.9	99.9	113.7	91.1	131.3	110.4	77.6	108.8	105.7
1882	118.8	98.7	110.1	91.2	137.5	107.6	78.1	114.6	108.5
1883	118.8	94.8	114.2	87.5	134.3	98.1	77.5	117.3	106.0
1884	108.9	88.9	102.4	81.0	129.5	95.7	76.3	111.9	99.4
1885	98.7	84.8	89.6	77.4	126.6	86.9	70.1	97.5	93.0
1886	99.5	85.1	86.2	75.8	128.5	83.9	68.4	91.3	91.9
1887	104.2	84.7	88.6	74.9	126.5	83.6	66.4	88.6	92.6
1888	109.4	84.7	94.9	74.9	124.8	86.0	66.9	89.3	94.2
1889	111.9	83.6	95.3	72.9	124.0	88.8	70.0	88.8	94.2
1890	104.6	82.4	92.5	73.2	123.7	87.9	69.5	89.7	92.3
1891	103.9	81.1	91.0	74.9	122.3	86.3	70.1	95.1	92.2

In the second table we have a tabulation of the same data in weighted form. In the column headed III the percentage given represents the average for all articles according to their importance in the budgets of the average family. In the column headed IV the author attempts to reach a still higher point of accuracy by assuming that the articles covered in the data represent over 68.6 per cent of the total expenditures of each family. The difference in results produced by these different methods seems to be rather small.

FALKNER PRICE TABLE WEIGHTED

I Year.	II Simple arithmetical averages. All articles.	III All articles averaged according to importance, certain expenditures being uniform.	IV All articles averaged according to importance, 68.6 per cent. of total expenditure.
1840	116.8	98.5	97.7
1841	115.8	98.7	98.1
1842	107.8	93.2	90.1
1843	101.5	89.3	84.3

I Year.	II Simple arithmetical averages. All articles.	III All articles averaged according to importance, certain expenditures being uniform.	IV All articles averaged according to importance, 68.6 per cent. of total expenditure.
1844...........	101.9	89.8	85.0
1845...........	102.8	92.1	88.2
1846...........	106.4	96.7	95.2
1847...........	106.5	96.7	95.2
1848...........	101.4	92.0	88.3
1849...........	98.7	88.9	83.5
1850...........	102.3	92.6	89.2
1851...........	105.9	99.1	98.6
1852...........	102.7	98.5	97.9
1853...........	109.1	103.4	105.0
1854...........	112.9	103.4	105.0
1855...........	113.1	106.3	109.2
1856...........	113.2	108.5	112.3
1857...........	112.5	109.6	114.0
1858...........	101.8	109.1	113.2
1859...........	100.2	102.0	102.9
1860...........	100.0	100.0	100.0
1861...........	100.6	95.9	94.1
1862...........	117.8	102.8	104.1
1863...........	148.6	122.1	132.2
1864...........	190.5	149.4	172.1
1865...........	216.8	190.7	232.2
1866...........	191.0	160.2	187.7
1867...........	172.2	145.2	165.8
1868...........	160.5	150.7	173.9
1869...........	153.5	135.9	152.3
1870...........	142.3	130.4	144.4
1871...........	136.0	124.8	136.1
1872...........	138.8	122.2	132.4
1873...........	137.5	119.9	129.0
1874...........	133.0	120.5	129.9
1875...........	127.6	119.8	128.9
1876...........	118.2	115.5	122.6
1877...........	110.9	109.4	113.6
1878...........	101.3	103.1	104.6
1879...........	96.6	96.6	95.0
1880...........	106.9	103.4	104.9
1881...........	105.7	105.8	108.4
1882...........	108.5	106.3	109.1
1883...........	106.0	104.5	106.6
1884...........	99.4	101.8	102.6
1885...........	93.0	95.4	93.3
1886...........	91.9	95.5	93.4
1887...........	92.6	96.2	94.5
1888...........	94.2	97.4	96.2
1889...........	94.2	99.0	98.5
1890...........	92.3	95.7	93.7
1891...........	92.2	96.2	94.4

132. *High prices during the Civil War.*—It will be noticed that the prices during the Civil War Period are extremely high, the percentage for the year 1865 being 216.8 per cent. This extraordinary rise is due to the fact that the prices were calculated in depreciated paper money. We have inserted Table No. 4 showing the average prices reduced to a gold basis during the period when greenbacks were depreciated. This table will show to what extent the extraordinarily high prices of the Civil War were due to the inflated paper currency. As we have explained elsewhere, most of the people at that time did not regard the paper currency as depreciated, but thought gold was appreciated.[1] The fact that there was nothing connected with the supply and demand for commodities in general which could account for the more than doubling of the prices in the year 1865 is evidence that the extreme fluctuation of prices was to due to money rather than to goods.

The figures we have spoken of as percentages are usually called index numbers. These price tables prepared by Professor Falkner are continued in the "Bulletin of the Department of Labor,"[2] and the index numbers for the simple table for the period from 1891 to the present time are given on the following page:

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[1] The demand for the greenback as money in 1862 must certainly have been much less than had been the demand for gold in preceding years, for the country had been split in two, so that the monetary demand brought to bear upon the greenback came, for the most part, from only one section.— Johnson, "Money and Currency," p. 276.

[2] See "Bulletin for the Department of Labor" for March of each year. A continuation of Professor Falkner's Tables is found in Bulletin No. 27. The Department of Labor has maintained a price table in its bulletins arranged on a basis different from that of the Falkner tables.

COMPARISON OF VARIOUS PRICE TABLES

Year	Falkner, Gold....	(1860=100) Paper (1862–1878)	U. S. Department of Labor	Sauerbeck (Base 1867–1877)	"Economist" (Base 1845–1850)	Soetbeer (Base 1847–1850) .....
	(American)			(English)		(German)
1860..........	100.			99	122	121.0
1861..........	100.6			98	124	118.1
1862..........	114.9	117.8		101	131	122.6
1863..........	102.4	148.6		103	159	125.5
1864..........	122.5	190.5		105	172	129.3
1865..........	100.3	216.8		101	162	122.6
1866..........	136.3	191.0		102	162	125.8
1867..........	127.9	172.2		100	137	124.4
1868..........	115.9	160.5		99	122	122.0
1869..........	113.2	153.5		98	121	123.4
1870..........	117.3	142.3		96	122	122.9
1871..........	122.9	136.0		100	118	127.0
1872..........	127.2	138.8		109	129	135.6
1873..........	122.0	137.5		111	134	138.3
1874..........	119.4	133.0		102	131	136.2
1875..........	113.4	127.6		96	126	129.8
1876..........	104.8	118.2		95	123	129.3
1877..........	104.4	110.9		94	123	127.7
1878..........	99.9	101.3		87	116	120.6
1879..........	96.6	96.6		83	100	117.1
1880..........	106.9			88	115	121.9
1881..........	105.7			85	108	121.0
1882..........	108.5			84	111	122.1
1883..........	106.0			82	106	122.2
1884..........	99.4			76	101	114.2
1885..........	93.0			72	95	108.7
1886..........	91.9			69	92	104.0
1887..........	92.6			68	94	102.0
1888..........	94.2			70	101	102.0
1889..........	94.2			72	99	106.1
1890..........	92.3		112.9	72	102	108.1
1891..........	92.2		111.7	72	101	109.2
1892..........	87.6		106.1	68	97	
1893..........	87.2		105.6	68	96	
1894..........	79.3		96.1	63	95	
1895..........	77.2		93.6	62	87	
1896..........	74.6		90.4	61	91	
1897..........	74.0		89.7	62	88	
1898..........	77.1		93.4	64	86	
1899..........	83.9		101.7	68	87	
1900..........	91.2		110.5	75	97	
1901..........	88.5		108.5	70	97	
1902..........	93.2		112.9	69	89	
1903..........	93.7		113.6	69	91	
1904..........	93.3		113.0	70	100	
	(American)		(American)	(English)		

133. *Foreign price tables.*—The index numbers given in the last three columns of the table are reproduced from the most important foreign investigations. The Sauerbeck and *Economist* tables are English, the Soetbeer tables are German. The table of Mr. Augustus Sauerbeck was published in the *Journal of the Royal Statistical Society.* His indexes are computed by a simple unweighted arithmetical average. He has endeavored to arrange a limited number of commodities, all of which represent raw products, in classes in such a way as to be equivalent to weighting.

The *Economist* tables have the distinction of being the first to be compiled. Twenty-two articles only are employed in this table and the quotations are those of a given date, either the first of January or the first of July on the averages for the year. The commodities are chosen disproportionately, there being out of the twenty-two, four in which cotton is the principal element.

The German table of Soetbeer was frequently referred to in the Silver Controversy in this country in 1896. The number of commodities was over three hundred and the result represents the simple unweighted arithmetical average on the basis of the years 1847 to 1850.

As we have indicated before, the value of the study of the science of money and currency is the understanding it gives us of the significance of price changes and the data from which predictions as to the course of prices can be made. It is therefore important to get clearly in mind the main points of the two preceding chapters.

In the first place a general rise in the prices of all commodities and services indicates that the reason is to be found in a change in the value of money as compared with other things, since we know that a general rise of values is an impossibility. The rise and fall of general prices is best indicated by means of price tables which correct the errors which a limited observation would be likely to incur. The most convenient and acceptable price table for the average business man is that published in the bulletins of the Department of Labor. A study of price tables will give the student an idea as to the stage of the swing at which the observed prices are.

134. *Economic forces to be observed.*—Observing the present tendency of prices he will endeavor to find the reason for the tendency. He will find almost any time a number of reasons to account for a rise and also a number of reasons to account for a fall. This makes it necessary for him to estimate quantitatively the potency of each one of these forces and to balance one against the other, in order to discover in which direction the result of these forces tends. The most important of these permanent forces are as follows:

1. *Production of gold.*—At the present time it will be found that the annual production of gold is increasing. This in itself means a lower value for gold inasmuch as only a very small quantity of gold that is once brought into existence disappears. Nearly all of it is added to the stock already on hand. It is estimated that only about 20 per cent of the gold annually produced is used in the arts. Even this amount is not permanently withdrawn from monetary uses, since it is so easy to reduce old jewelry and plate to coin.

2. *Use of substitutes for money.*—An increase in the supply of fiat or credit money has the same effect on prices as an increase in the supply of gold. The increase in Government issues is purely an arbitrary matter and if it occurs in only one country at any given

time it is likely to displace the proportionate amount of gold, which will be exported from the country as a result of the effects produced upon the foreign exchange market by a rise of prices. The first result of an increase of Government paper money is likely to be a rise of prices, but after the equilibrium is established in the course of a few years, other things being equal, the prices are likely to return to their former level.

The increase in the amount of credit which serves the purpose of a medium of exchange is highly important. This medium depends upon the degree of perfection to which the banking machinery of a community has been developed. An increase in the number of banks and trust companies and in the capitalization of old institutions indicate increased credit facilities which are equivalent to an increase in the supply of the medium of exchange. For short periods of time the periodical inflation and deflation of credit, producing the alternate booms and panics, must be taken into account. In the year 1908 there was a considerable reduction in the amount of credit over the year 1906, while the number of banks and the amount of capitalization actually increased. The total bank clearings of the principal cities of the United States are a much better index of the volume of credit doing money work than the number of banks or their capitalization.

3. *Volume of production.*—It is obvious that the greater the amount of goods produced the greater will be the number of bidders for money, offering goods in exchange. Under modern conditions practically all the goods produced represent a demand for money, as they must change hands before they are consumed. The producer nowadays very rarely consumes his own product.

An increase of population means simply an increase in the amount of goods produced and consumed and means a greater competition for the existing supply of money.

4. *Extravagant expenditures of the people.*—During the financial difficulties following the panic of 1907 a great deal was said about the effect of the growing extravagance in personal expenditure on the part of the people of this country during the preceding four or five years. This was held by some to be the cause of the stringency of the money market.

Of course the more extensive purchasing by the people represents an addition to the bidding for goods and the offering of money, so that we might conclude that a rise of prices would be the result. On the other hand extravagant expenditure could not have appeared unless incomes had been considerably increased. Increased incomes are due to a greater productivity. People produce more goods and hence have a larger amount to sell before they can realize their income. This enlarged production of goods causes a bidding for money, which counterbalances the enlarged bidding for goods, that follows immediately upon it. Thus the influence upon prices is diminished.

135. *Saving and investing.*—If instead of spending their incomes in living expenses these people had employed them in any other way except hoarding—either depositing them in banks or investing them in securities the producing power would simply have changed its form and instead of causing a bidding up of prices of consumption goods would have had a similar effect in connection with production goods. Money deposited in banks or invested in securities is simply turned over to industrial and business enterprises, when it is spent for

goods, thus having the same effect on the general level of prices.

The effect of the expenditure of incomes for consumption goods instead of for production goods has no immediate effect on general prices, but it has an important effect upon the future production of goods. Expended upon consumption goods, the effect is to diminish the supply on the market and encourage industrial activity to replace them. If incomes are generally saved and invested they lead to a considerable enlargement of the productive capacity of industries and eventually lead to an increase in the quantity of consumable goods to be marketed when the factories and machines and equipment begin to run a product.

The deductions from this are that extravagant personal expenditures tend to raise prices of consumption goods and to retard future over-production. Saving and investment are far more likely to be the immediate cause of a panic and depression on account of the larger quantity of goods upon the market after the production goods have been installed and before the consuming capacity of the country has caught up with the productive capacity.

A much more reasonable cause for a panic than extravagant expenditure is to be found in the unreasonable expansion of credit, which is likely to be brought about by rising prices and larger profits which induce men to undertake productive enterprises far in excess of the present consuming power of the people. The increased bidding for money which such over-production brings about gives the impulse to a cumulative demand for money and a rapid rise in its value compared with other things.

The rule therefore, upon which predictions as to the future course of prices can be made is this:

Do existing and future conditions, taken as a whole, warrant the conclusion that the bidding for money or the offering of goods will be stronger than the offering of money and the bidding for goods?

CHAPTER IX

DOMESTIC AND FOREIGN EXCHANGE

136. *Relation between foreign and domestic exchange.*—In a preceding chapter mention has been made of the process by which the gold produced in any part of the world is distributed throughout the world. In the present chapter it is proposed to study a little more closely the details of the process of the distribution of money and the methods of making payments between distant points.

The subject of foreign exchange is usually regarded as exceedingly complex and technical. The reason for this is that some of the fundamental principles are but little understood. The principles of foreign exchange are exactly the same as those of domestic exchange, the only difference being that there is in foreign exchange the added element of translation from one coinage basis to another.

137. *Payments by means of credit balances.*—The handling of actual currency in transactions of any size, even though the currency be in paper notes of large denominations and the transaction takes place locally, is inconvenient. It is one of the functions of banks to obviate the necessity of making payments in currency, by means of a checking system. The whole idea of making payments and settling accounts without the use of cash depends upon the fact that under certain circumstances a creditor is just as willing to receive in payment the right to demand money as he is to receive the cash itself. In cases of large transactions it would be considered a great hardship on the part of the recipient of the payment to be required to accept the currency.

138. *Function of the bank in making payments.*—A bank is an institution which permits persons to create credits either by the deposit of cash or by borrowing at the market rate of interest. Furthermore it permits these creditors to draw orders upon it for any amount up to the limit of their credit. These orders or checks give the holder the right to demand the cash or to create credit for himself by a deposit of the checks. These credits on the books of the banks in favor of their patrons furnish a means of payment which has almost superseded the use of cash in transactions of any size. If there were only one bank in a town all the checks drawn against it would return to it, either for payment or deposit. If there are several banks in the city some sort of clearing system is required for settling the debit and credit balances among the different institutions.

139. *Payments at a distance.*—When payments are to be made between distant localities the matter of distance increases the complexity of making the settlements, but the principles remain the same. If a business man in Chicago wishes to pay a bill in Cincinnati he will probably draw a check on his local bank exactly as though his creditor did business in the same city. The Cincinnati man will deposit the check in his local bank and put upon it the burden of making the collection. When the banking system of the country was not so well organized as at present the charge for making collections of local checks was so heavy that the creditors frequently refused to take local checks. Under these circumstances the debtor was obliged to apply to his

bank for a draft which would be acceptable in the city where the amount was payable.

The fact that New York is the commercial and financial center of the United States and that business men in every city and town are likely to have financial relations with that city, either purchasing goods from it or selling goods to it, has made it advisable for banks throughout the country to maintain deposits in banks of that city. Thus it happens that there are always payments to be made in New York by merchants buying there and payments to be made from that city by merchants selling there.

140. *Exchange on New York.*—Without the use of exchange it would be necessary to pay for every shipment of goods by forwarding cash and to receive payment for every consignment by transporting cash in the opposite direction. With the use of credit the shipper in the inland town receives payment for his consignment by either drawing a draft upon the consignee or awaiting the receipt of a draft upon a New York bank. Either of these instruments he deposits in his local bank which forwards it to New York and receives a credit there upon the books of the bank against which it was drawn. The bank has then the right to receive a certain sum of money in New York and can realize upon this right either by requesting the shipment of cash or by drawing a draft against it.

Merchants who have made purchases from New York must provide a means of payment in New York when the bills are due. The local banks having deposits in New York are quite willing to sell orders upon the New York bank. Thus by means of buying and selling the right to sums of money in New York the payments which are necessitated by the movement of goods in and out are made.

141. *How the banks handle New York exchange.*—New York exchange or orders upon deposits in New York banks are acceptable everywhere; in the first place, because there are so many persons wishing to make payments in that city, and in the second place because every banking institution in the country deals either directly or indirectly with some New York bank.

How the local banks get their power to sell drafts on New York can best be shown by a concrete illustration. We will suppose that a bank in Aurora, Illinois, has on deposit $10,000 with the First National of Chicago. Let us suppose that an Aurora manufacturer has sold stoves to an eastern dealer and has received in payment a check for $1,000 on the Corn Exchange bank of New York. He will deposit this check in his Aurora bank, which will send it to its Chicago correspondent, and thereby increase its credit balance to $11,000. The Chicago bank will send the check to its correspondent in New York, and so increase its credit balance in New York by $1,000. By an arrangement with the First National Bank of Chicago the Aurora bank is able to sell drafts on the Corn Exchange of New York, using for the purpose blank drafts furnished by the First National. It is quite possible that on the same day a merchant in Aurora, who has bought goods from New York, will call upon the Aurora bank for a draft on New York. He may not want a draft for exactly $1,000, but that does not matter. The Aurora bank is able to sell him a draft to any amount up to $11,000, for its credit balance in the Chicago bank gives it a right to "draw" upon New York for that amount. Thus, on account of New York's trade relations with all parts of the country, banks everywhere are usually able to sell drafts on that city without being compelled to ship currency.

New York exchange is used not only for payments between

New York and other parts of the country but also for payments between points in the United States outside of New York. A man living in Buffalo who owes $1,000 to a man in New Orleans can best pay the debt by remitting a draft on New York City. This method is the one usually employed, for Buffalo banks maintain no balances in New Orleans, and so cannot sell drafts on that city. They can, however, sell a draft on New York, and that will usually be accepted by New Orleans banks at par. When the reader takes into account that New York checks and drafts are every day being used in this way for the cancellation of debts in all parts of the United States, he will understand why New York exchange is deservedly called the "business man's money."[1]

142. *Settlement of accounts between banks.*—While in the long run the movement of goods from New York and to New York must practically balance, yet it would be a rare coincidence if the commodities sent from any given locality to New York exactly balance the goods received from that city. Any particular bank, therefore, has occasion to purchase more New York exchange than it needs to sell, or it has a demand for more than it has occasion to buy or receive on deposit from its customers. Unless the country bank wishes to shift its deposit account from a New York bank to some other bank it will be necessary to make a shipment of currency.

In case a country bank has a deposit with its New York correspondent which it considers large enough it will accept deposits of checks on New York only with the intention of making shipments of cash to reimburse itself for the sums paid out. The shipment of currency involves expense and it is quite likely that it will not accept superfluous New York exchange unless it receives a fee which will cover the cost of collecting the same in cash. This cost depends upon three items: first the express charge, second insurance, and third the loss of interest. The charge for transportation is usually combined with the charge for insurance by the express company. The moment the New York bank delivers the cash to the express company for shipment to the country bank upon its order it ceases to pay interest upon that sum. The country bank therefore loses the interest upon the same until it receives it and uses it as a basis for interest paying loans.

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[1] Johnson, "Money and Currency," pp. 79–80.

143. *Cost of currency shipments.*—The cost of currency shipments between New York and Chicago is in the neighborhood of 50 cents per thousand dollars; between St. Louis and New York it is 60 cents; between New Orleans and New York it is 75 cents, and between San Francisco and New York it is $1.50.

144. *Settlements through the sub-treasuries.*—The cost of shipping currency from one city to the other is frequently saved to the banks by the Treasury Department of the Government. For a good many years payments to be made between the Treasury at Washington and the sub-treasuries in the various large cities were all conducted by cash shipments. It happened very frequently that at the same time that the treasury was forwarding considerable sums of cash between two cities, the banks would be shipping currency in the opposite direction. An ingenious cashier in New Orleans early in the seventies suggested to the Secretary of the Treasury, McCullough, that a saving both to the Government and the banks might be effected if the banks when they wished to transmit money to a city in which a sub-treasury was located would ascertain whether the Government at the same time did not wish to send money in

the opposite direction. If this proved to be the case it would be profitable to the banks and to the Government to allow the banks to deposit the money in the Treasury and receive an order upon the Treasury in the other city. The Treasury office in the first city would receive the currency it required from the depositing bank and the bank in the other city would receive the currency from the Treasury instead of from its correspondent and all cost of transporting the money would be eliminated.

145. *Rate of New York exchange.*—Suppose there was a great demand for New York exchange in any city on account of the heavy bills of merchandise falling due at some particular season of the year. The banks will discover that the demand for New York exchange far exceeds the supply of checks and drafts deposited by customers. Their deposits with their New York correspondents are reduced and in order to continue selling New York exchange they must ship currency to that city. In that case they will be justified in charging at least 50 cents premium for every $1,000 of New York exchange sold in order to reimburse themselves for the actual cost. Competition between the local banks will not permit a much higher charge than this.

On the other hand if the receipts of New York exchange exceed the demand for it, on account of heavy shipments of grain or produce to the chief exporting city of the country, the banks will find their deposits in New York larger than they care to maintain. They will be forced to order shipments of currency to them. To reimburse themselves for the expense they will subtract from the face value of the exchange bought or received on deposit, the cost of doing the business. Thus it is possible for exchange on New York in San

Francisco to be sold at a premium of $1.50 or to be offered at a discount of the same amount.

146. *Significance of rates of domestic exchange.*— The premium or discount on domestic exchange is published in the principal dailies and is useful to the business man as indicating the volume and direction of trade at any particular time. An unusually high premium on New York exchange or an unusually prolonged premium will indicate that the purchases of local merchants has been unusually heavy in that year if there are no unusual transactions to affect the price of exchange.

Why does it not happen that under certain circumstances a community may buy more goods than it sells during any particular period and thus be forced to part with all of its currency in settling the balance? Since each trader is simply looking out for his own private profit and does not concern himself with the question of the amount of currency there seems to be no reason why a community might not be drained of its currency. This brings up the question of the balance of trade, the principles of which are the same whether the exchange of goods is between two separate nations or between two localities within the same nation.

Suppose for any reason that there should be an unusually heavy purchasing of goods by the merchants of a western State in any particular year. The merchants would buy from the banks New York exchange with which to pay their bills. The banks, after having exhausted their credits in New York would be obliged to ship currency in order to cover the drafts on New York sold to the merchants.

There is never any danger that a community will be stripped of its money or cash as a result of its purchases of goods from other communities. No matter how freely Chicago and the country tributary to it may purchase goods from the East, those purchases can never make any serious drain upon the cash supply of Chicago. No matter how extravagant the people of the West may be, their purchases of eastern goods can never be greatly in excess of their sales to eastern customers. Should the people of Chicago for extraordinary reasons at any time increase their purchases from New York and other eastern cities, the first effect in Chicago would be an increase in the demand for New York exchange and in bank shipments of currency from Chicago to New York. The loss of currency in Chicago, since it would reduce the lending power of Chicago banks, would tend to cause a rise in the rate of interest and a rise in the value of money. The prices of commodities named would begin to decline; not of all commodities, but of those which are subjects of speculation, such as stocks, wheat, corn and pork. Most of the speculators in these articles are borrowers, and the interest they pay is an important item in the expenses of their business, so that when the interest rate rises they are obliged to contract their operations. Chicago would thus become a good place to lend in and also a good place in which to buy stocks and bonds, wheat, and other speculative commodities. In other words, the value of money would rise in Chicago, and people in other parts of the country would increase their purchases in Chicago markets, remitting New York exchange in payment. The reader must not suppose that those changes in price or in the rate of interest need be so great as to attract general attention. Nevertheless it cannot be doubted that such changes do take place, and that as a result the sales of Chicago to other parts of the country are so adjusted that in the long run they furnish a supply of New York exchange equal to the demand.

Thus it happens throughout the country that in the course of a year the debts of every community are always practically balanced by its credits on account of sales, so that large shipments of currency are never necessary. Indeed, if our monetary and banking systems were perfect, no shipment of currency from one part of the country to another would ever occur as a necessary result of trade transactions. Money or currency would only be shipped to a community as a result of an increasing need for it as a medium of exchange or as a basis for the expansion of bank credits. In Canada, for example, on account of the elasticity of its bank-note circulation, seasonal variations in the demand for currency are easily provided for by the local banks and their branches.[1]

147. *The clearing house principle.*—Domestic exchange as we have seen, is simply a banking device to avoid the unnecessary shipment of money by settling balances only. The principle is exactly the same as that on which clearing houses are based. The banks in any one city find at the end of the day that they have received from their depositors a great number of checks drawn on neighboring banks. Before the days of the clearing house each bank sent a messenger to all the others with the items against them and received the cash in payment. At the same time that each of the banks were sending out messengers to make collections they were paying cash over the counter to the messengers of other banks in settlement of the checks against them. By having a common place of meeting the messengers could deliver the items to the debtor banks and could receive the checks representing the credits due them all at one time and could easily figure up the difference between the debits and the credits. Settlement could then be made by payments representing the differences which were likely to be less than 10 per cent of the total transaction, thus saving the handling of 90 per cent of the cash represented by the checks handled.

The clearing house principle has not yet been applied to its fullest extent in the settling of accounts between banks in different localities. The forwarding of the checks to a central point, together with other difficulties which will be discussed later, has up to this time made the establishment of a clearing institution for out of town collections an impossibility. The same result, however, is accomplished by the custom of country banks keeping balances in the city banks and drawing against such accounts instead of shipping currency.

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[1] Johnson, "Money and Currency," pp. 83–84.

148. *Settling balances by use of credit.*—Methods have been found for eliminating the shipment of currency, even in order to pay balances. Banks which become debtors to others through the settlement of accounts may borrow the balance due from the creditor bank and pay interest thereon. This of course is not a final settlement of the balance, but simply postpones the settlement, yet if in the near future the balance happens to run in the opposite direction the loan may be liquidated by a credit balance instead of by the payment of cash.

149. *Gold the international medium.*—In the case of domestic exchange ultimate payments may be made in any form of currency but in the settlement of balances between different nations gold is the only acceptable medium. Since gold is the ultimate basis of credit in all civilized countries, and since a volume of currency from six to ten times its amount is erected upon it, the movements of gold from one place to another are of vastly more importance than movements of any other form of cash. Exports and imports of gold in and out of a country are likely to disturb the money situation and to necessitate frequent readjustments of credit conditions at new rates of interest. The movements of gold are the result of foreign exchange operations, and it is

this fact which causes business men to scrutinize so carefully daily quotations for foreign exchange.

150. *Function of the dealer in foreign exchange.*—The service to the business community of the international banker who deals in foreign exchange is not only that he does away with over 90 per cent of the shipments of gold which would otherwise be necessary, and thus causes a great saving of expense and risk in settling commercial transactions, but of far greater importance is the service that he renders in steadying the credit conditions the world over. His function is more than to eliminate the shipments of money back and forth to make payments—he still further decreases such shipments by borrowing and lending in foreign markets, so that the final and absolutely necessary shipments of gold are reduced to a very low minimum as compared to the total amount of business transacted.

151. *Example of foreign exchange.*—Let us take a typical case in foreign commerce and show how the international banker facilitates the transaction. Armour & Company receive an order from a British dealer in meats for a shipment of beef. After the beef has been loaded on the cars Armour & Company draw a draft on the English consignee which in effect requests him to pay to the Chicago National Bank or anybody else designated by them, the sum of £1,000 sterling. Armour & Company might have waited until the English customer had received the meat and remitted to them a check which Armour & Company could have collected through their bank. If this were the custom Armour & Company would be required to tie up an enormous amount of capital in this export business. It is the almost universal practice of British business men,

however, to draw upon their customers for the amount of goods sold as soon as they are shipped and the American exporters find this very advantageous because they can realize the proceeds of a sale of goods very quickly and it relieves them from the necessity of borrowing so much working capital.

The Chicago National Bank is willing to purchase or give credit to Armour & Company for the draft immediately, although it cannot reimburse itself for several weeks unless it sells the draft outright to another bank, in which case it simply shifts the burden to the other bank. It is the business of a bank to provide commerce with working capital for a consideration; in this case the consideration comes to them in the form of a discount which they deduct from the face of the draft in purchasing from Armour & Company.

152. *Why bankers are willing to purchase foreign drafts.*—The bankers are willing to purchase the draft, even though they have never heard of the English firm on whom it is drawn, for the following reasons: (1) The reputation of Armour & Company assures them that the draft would not be drawn unless a shipment of merchandise had been made. (2) Armour & Company as drawers of the draft under the universal law of negotiable instruments, endorse the payment of the same and may be held for payment if the English drawee fails to accept it. (3) In most cases there is attached to the draft a negotiable bill of lading which vests the right to receive the goods in the possessor of the bill of lading. The English bank to whom they have assigned the draft will not deliver the bill of lading until the consignee has accepted or paid the draft. (4) To still further guarantee the banks against loss there is attached to the draft beside the bill

of lading an insurance policy which entitles the banker to receive reimbursement if the consignment should be damaged or lost in transit. There may also be attached to the draft certificates of Government inspection certifying the quality of the meat and also an invoice of the shipment.

153. *Progress of draft.*—These safeguards are so effective in guaranteeing payment of the draft that it is extremely rare that even a dispute occurs in transactions of this kind. The Chicago National Bank, if it has no correspondent in England, may sell the draft in New York. The New York bank will send the draft to England for collection and credit the same to its account. New York banks are always willing to purchase these foreign drafts and to create credits abroad in order to be in a position to sell foreign exchange to importers and others who are required to make payments abroad. The foreign trade of this country is so large that there is always a demand as well as a supply of foreign exchange. The international banker who deals in it is exactly like a merchant who buys and sells any commodity.

154. *Quotations for foreign exchange.*—The quotations for sterling exchange are the prices at which the right to receive certain sums in England is bought and sold in New York and varies like everything else according to demand and supply.

155. *The pound sterling.*—The monetary unit of England is the pound sterling, which contains 113 grains of pure gold. Since our monetary unit is the dollar, composed of 23.22 grains of gold, it is easy to calculate that the English sovereign, which is the name of the coin containing a pound sterling, is exactly equivalent to $4.8665. In other words an English sovereign

can be taken to a United States mint and recoined into 4.8665 American gold dollars.

There is a great difference, however, between the right to receive gold sovereigns in England and the possession of gold sovereigns in the United States. A gold sovereign in England will not pay a debt in America unless it is first imported into this country and coined into legal tender. Therefore it is worth to its American owner $4.8665, less the cost of bringing it to this country, unless he can realize upon it by selling the right to receive it in England to some one who wishes to use it there.

156. *Cost of shipping gold.*—The cost of shipping gold across the Atlantic varies slightly from time to time. The following figures, showing the cost of shipping $1,000,000 in gold from New York to London were furnished by the representative of one of the largest New York banking houses:

Invested in fine bars, 23,220,000 gr.	$1,000,000
Assay office premium on bars 4 cents per $100	400
Freight 5-32 per cent	1,562
Insurance 1-16 per cent	625.50
Packing and cartage	70
	$1,002,657.50

The Bank of England's price of gold varies 77s. 9½d. to 77s. 10½d. per ounce, English standard, 913 3-3 fine. The mint coins an ounce of gold, English standard, into 77s. 10½d.; but the Bank of England, with which it is the custom of the bullion brokers to deal, usually pays a fraction less than this sum, thus saving itself from loss of interest while the bullion is being coined. It is assumed below that the Bank pays 77s. 10d. per ounce:

48,375 oz. fine equal 52,772.7 oz. 916 2-3 fine.

52,772.7 oz. at 77s. 10d.	£205,374
Deduct sundry expenses	4
Net receipts in London	£205,370

Cost of sovereign (1,002,675.5 ÷ 205,370)	$4.8822
Mint par in the United States	4.8665
Cost of shipment per sovereign	$ .0157

No loss of interest is included in the foregoing. The New York banker who furnished the figures held that no such item was involved, for he sold sterling exchange as soon as he made shipment and so was never out his money in consequence. If we include interest, we raise the cost of shipment to $.0197 per sovereign.[1]

157. *The minimum gold point for sterling exchange.* —Calculating the total cost of shipping gold between America and Europe at the lowest figure of two cents per pound sterling, it is easy to understand why $4.8465 is called the minimum gold point for foreign exchange. If there should be an extraordinary supply of foreign bills for sale their price under normal conditions could never go far below this figure because there would always be some international banker who would be willing to pay for them the moment there was any profit in buying them, for the purpose of exporting the gold, after they had been cashed in England. This minimum price does not mean that the value of foreign bills is an exception to the law of supply and demand, but that when the price falls below a certain minimum there arises automatically an unlimited demand.

158. *Maximum gold point for sterling exchange.*—

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[1] Johnson, "Money and Currency."

On the other hand the price of sterling bills may not rise above $4.8865 under normal conditions because at that figure there is always an unlimited supply, so that no one who wishes to buy need pay any more. The reason for this unlimited supply is this: The international bankers, seeing a chance for profit, will sell foreign exchange above the maximum gold point whether or not they have a credit balance abroad. Lacking such a balance, they buy gold with the proceeds of the bills. As soon as they have been issued they export gold to Europe so that it will arrive at the same time the bills are presented for payment, thus closing the transaction as far as the issuer of the bills is concerned.

159. *Why sterling exchange may fall below* $4.8465. —We have seen that theoretically the price of demand sterling cannot fall much below $4.8465 because of the great demand on the part of the bankers when it tends to fall below. There are conditions, however, under which the price may fall considerably lower without calling into existence this demand. In March, 1907, the price fell to $4.83 for a time, and in the autumn it fell still lower. There were several reasons for this.

(1) The rate for call loans in New York was very high and the bankers who would otherwise have purchased the exchange did not do so because it was more profitable to loan the money than to invest it in the exchange which would have tied it up for at least two weeks, the time required to send the bills to London, exchange them for gold, and ship the gold to this country.

(2) The reluctance of the American bankers to withdraw gold from England at a time when it was needed there and when there was danger of a rise in the dis-

count rate if the reserve in the Bank of England were endangered.

(3) The difficulty in getting gold for export. The bills could be paid in notes and although the Bank of England must redeem all notes when asked to do so, they have the right to pay out coins of less than full weight and make a difference of a cent in the £ in the profit of the exporter.

(4) The high price of gold bullion in London. To avoid the loss incidental to shipping coins, the abrasion and the light weight, bars of gold must be purchased in the market. Gold bullion is marketed in London as a commodity but with fixed limits to fluctuation of price.

(5) The premium on currency in New York in November, 1907, due to the suspension of cash payments by the banks.

160. *The gold market.*—The bulk of the gold produced in the world comes from South Africa direct to London to the amount of about $2,500,000 per week. The bullion brokers meet on Mondays to trade. Some of them have certain amounts of bullion to dispose of; others have buying orders. They begin by comparing notes and quite a variety of interesting situations may be disclosed. There may be a big amount to offer and a few small buyers, or vice versa. At present there is a keen competition for the gold.

The Bank of England is required to pay out notes for gold (to buy gold) at the rate of 77s 9d per ounce and this fixes the minimum price. On the other hand, the Bank is under legal obligation to redeem its notes for gold at the rate of 77s 10½d per ounce. This appears at first sight to limit the selling price, but on account of the right of the Bank to pay out light weight coins for the notes the maximum is raised to practically

78s per ounce. There is a tacit understanding that the Bank is to have preference when it is willing to pay the best price offered by any other bidder.

The fact that the bank of England must buy and sell all the gold offered at the prices fixed by law, makes it very difficult for England to hold her supply of gold when other nations are bidding high for it by maintaining high interest rates. England for this reason is called a "free" gold market. The Bank of England exercises control over the gold supply by manipulating the rate of discount, a rise in the rate discourages both foreign and domestic borrowing not only at the Bank but from all other banks who are forced to follow the lead of the Bank in the rate. This means of control is effective, but it is expensive to the business interests of the country to whom the difference of 1 per cent in interest payments means a great deal.

161. *Bank of France.*—During 1907, the system of France seems to have been superior; while there were stringencies in all other markets, while the rate of the Bank of England was held for a long time at 6 per cent, customers of the Bank of France could always get funds at 3 per cent. The Bank of France has a monopoly of note issue, but it is not compelled to redeem its notes in gold. When it desires to protect its gold reserve, the Bank of France refuses to pay out gold in quantities for export except at a premium. This premium is never so high that would-be exporters are induced to gather up the outside gold at considerable expense, but it is high enough to discourage lending in foreign markets by French capitalists without interfering with foreign trade.

Proximity of the quotations for demand sterling to the minimum or maximum gold points indicates an approaching export or import of gold. High quotations indicate exports, while low quotations indicate imports.

162. *Gold shipments.*—Shipments of gold interfere with the basis of credit and are therefore carefully watched by everybody whose interest can be affected by changed conditions in the credit market. The rate of interest and especially the rate of call loans is sometimes changed quite suddenly on this account. A sudden weakening of the call loan rates is very likely to lead to a calling of loans based on securities as collateral with the result that stocks are likely to be thrown on the market for sale, thus depressing prices. This explains the close relation between the foreign exchange market and the stock exchange.

163. *Our foreign commerce.*—It is a well-known fact that according to the official figures given out at the Custom House our exports considerably exceed our imports. The figures for the past ten years appear as follows:

STATISTICS OF FOREIGN TRADE OF UNITED STATES.[1]

Twelve months ending June 30.	Total Imports.	Total Exports.	Excess of Exports.
1898	$ 616,049,654	$1,231,482,330	$615,432,676
1899	697,148,489	1,227,023,302	529,874,813
1900	849,941,184	1,394,483,082	544,541,898
1901	823,172,165	1,487,764,991	664,592,826
1902	903,320,948	1,381,719,401	478,398,453
1903	1,025,719,237	1,420,141,679	394,422,442
1904	991,087,371	1,460,827,271	469,739,900
1905	1,117,513,071	1,518,561,666	401,048,595
1906	1,226,562,446	1,743,864,500	501,302,054
1907	1,434,421,425	1,880,851,078	446,429,653
1908	1,194,341,792	1,860,773,346	666,431,554

favorable balance

These figures indicate that we are selling a great deal more than we are buying from foreign countries and the natural inference would be that we receive the balance due us from this trade in gold. This is far from being the case. In the year 1898 our excess of exports was $666,000,000, while our imports of gold were $76,000,000. In the year 1905 our excess of imports was $400,000,000 while we actually exported $390,000,000 worth of gold. The figures for the export and import of gold for ten years 1898–1908 are given below. This ten year average of imports is considerably higher than previous decades.

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[1] Page 1843 of Monthly Summary of Commerce and Finance of the U. S., April, 1909.

MOVEMENT OF GOLD TO AND FROM THE UNITED STATES.[1]

Twelve months ending June 30.	Total Imports.	Total Exports.	Excess of Imports.	Excess of Exports.
1901	$ 66,051,187	$53,185.177	$12,866,010	$
1902	52,021,254	48,568,950	4,452,304	
1903	44,982,027	47,090,595		2,108,568
1904	99,055,368	81,459,986	17,595,382	
1905	53,648,961	92,594,024		38,945,063
1906	96,221,730	38,573,591	57,648,139	
1907	114,510,249	51,399,176	63,111,073	
1908	148,337,321	72,432,924	75,904,397	

164. *Invisible items of foreign trade.*—Even though we do not get paid for our excess of exports in gold, nevertheless we are paid for them in some form or other. The figures of imports and exports include only the goods which pass through the Custom House. There are many kinds of transactions requiring payments of money which are never reported at the Custom House at all and yet their effect upon the trade balance is the same as merchandise. In the last decade the capital of the world has become more and more mobile as the facilities for loaning and investing in foreign countries reached a higher perfection through the banks and stock exchanges. England has always owned a very large amount of American stocks and bonds representing investments in our industries. It is

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[1] *Monthly Journal,* April, 1909, p. 1849.

said that the larger part of the capital used to construct our railroads before 1885 belonged to England. American securities are so extensively dealt in on the London exchange that the closing quotations on the London prices for them at the end of the day, which come, due to the difference in time, at the opening of our own exchanges in this country, have an important effect upon quotations here.

165. *Movements of capital.*—In recent years the well-known thrift of the French people has induced our financiers to make unusual efforts to establish a market for certain American securities in Paris. The Pennsylvania Railroad Company sold a very large issue of bonds in that country and at the present writing Morgan and Company are eagerly seeking the privilege of listing the securities of the United States Steel Corporation on the Paris Bourse.

The United States is just coming to be a market for foreign securities. The only foreign security which is at present quoted on our exchange is the Japanese war bonds. Portions of bond issues of South American states, such as Peru and Chili, are occasionally allotted to American bankers to be disposed of in this country.

The movement of these securities to and fro is the most potent cause of fluctuation in the foreign exchange market. Stocks are probably the first thing in the country to feel the effect of the tendency to higher prices, caused by an increased amount of money or credit. A very small rise in the quotations of securities is sufficient to cause considerable selling of them in this market, which has a tendency to create a demand for foreign exchange to pay for them, hence a rise in the price of exchange until exports of gold are induced.

This explains why an issue of paper money can drive an equal amount of gold out of the country so quickly, even before the prices of commodities have felt the change. The more highly developed the financial institutions of the world the more sensitive will every country become to price-changing influences.

166. *Interest and dividend payments to foreign stockholders.*—Another item of trade which affects the balance without appearing in the Custom House figures is the interest and dividend payments made to the holders of American securities. These payments are made in foreign exchange and create a demand for it, hence they have a tendency to lift the price of foreign exchange away from the gold import point.

167. *Freight.*—Most of the merchandise which is moved to or from the United States is carried in foreign ships. Since 1846 the Americans have found themselves at a disadvantage compared with England and Germany in the carrying trade of the world and the result is that we must pay freight charges to foreign companies. These payments are made in foreign exchange and help to create a demand to offset the excessive supply of bills on the market.

168. *Tourists.*—There is still another item which does not appear in the official figures. Since European travel has become so popular there has arisen a large demand for letters of credit on the part of tourists. The effect of these letters of credit is to create a demand for bills.

These four items, namely, ① securities owned abroad, ② interest and dividend payments to the holders thereof, ③ freight charges to foreign ship owners, and ④ tourists' expenses in Europe in excess of European travel in America—represent the equivalent of the excess of goods we export over those we receive from foreign countries.

169. *Foreign exchange market.*—Below are reproductions of a daily article on the foreign exchange market from the *Wall Street Journal:*

[February 24, 1909.]

The foreign exchange market opened strong, with demand sterling 4.8760@4.8765, up ten points from Saturday's close. There was a good inquiry for remittance, attributed to foreign selling of stocks here, and on account of the London settlement.

The market remained strong for the first hour's trading, in which demand sterling went to 4.8765@4.8770, but it became evident then that there was not sufficient buying power and the market thereafter sold off. The opening strength was largely influenced by the weak opening of the stock market and London's sales of stocks here were evidently overestimated. There was some buying of sterling cables for the settlement.

In the afternoon bidding was greatly withdrawn and the market showed further ease, closing with demand sterling 4.8745@4.8750, off fifteen points from the opening and off five points on the day.

[May 3, 1909.]

The foreign exchange market opened steady, with demand sterling 4.8740@4.8745, unchanged from Friday's close.

The large short interest which is said to exist in exchange was further in evidence to-day. The covering movement that started in on Thursday was continued with vigor during the short day's session demand sterling advanced fifteen points. It appears that a considerable part of the present movement is due to the manipulation of one institution, which is thought to be "rigging" the market.

The market closed strong with demand sterling 4.8755@4.8760, up fifteen points on the day.

[Compiled by Redmond & Co.]

	Cables.	Demand.	60-days.
Sterling open........	4 8760a4 8765	4 8740a4 8745	4 8620a4 8625
do closed......	4 8770a4 8775	4 8755a4 8760	4 8635a4 8645

170. *Explanation of articles.*—Our purpose in reprinting these articles is to acquaint the student with the meaning of the daily money articles.

"The foreign exchange market opened up ten points from Saturday's close."

A point in foreign exchange is 1/100 of one cent. The "London settlement" refers to the English practice of settling stock exchange transactions fortnightly. That is to say, if a customer gives an order to a banker to buy or sell he is not required to deliver or receive the securities until the next settling date. Because a great many speculators desire to close up their commitments before the settlement date there is likely to be considerable foreign trading just before settlement time. If the foreigners have been buying our securities for temporary speculation they are likely to close up the trade by selling. If they have been selling short they are likely to purchase securities just before the settlement.

"The opening strength was largely influenced by the weak opening of the call market and London sales of stock here were evidently overestimated."

The sales of American stocks by London traders would naturally give rise to a demand for exchange with which to settle. Lower prices in the New York market would induce foreign selling and thus strengthen the foreign exchange market.

"There was some buying of sterling cables for the settlement."

171. *Cables.*—A cable means the transference of credits by means of cable messages. Dealers in se-

curities who find that they have a balance against them just before settlement time in London have not sufficient time to buy other forms of sterling exchange and send them by mail. In order to meet their obligations in London they are obliged to provide funds in the market at once.

"A large short interest which is said to exist in exchange was further in evidence to-day."

Foreign exchange is bought and sold speculatively in much the same way as stocks. If the dealer believes that the price is going down in the near future because of the prospects of an unusual supply of bills or because of an unusually light demand he may "sell short." That is he will contract to provide exchange at a given price at a future time. A short interest existing in sterling exchange will have the same effect upon prices of exchange as the same condition existing in stocks. A person who has sold short must ultimately buy the thing he has agreed to deliver and this buying or "covering" by shorts is likely to sustain prices even in the face of adverse conditions.

"The covering movement that started in Thursday was continued with vigor."

For some reason on this particular date the shorts concluded that prices were going higher and made all haste to purchase in order to make deliveries before the quotations went higher yet.

"It appears that a considerable part of the present movement is due to the manipulation of one institution which is thought to be 'rigging' the market."

Here again we find another similarity between the market for foreign exchange and the stock market. Exchange is manipulated by artificially interfering with the bidding and offering. The manipulator who desires to buy or sell either depresses or raises the market quotations by purchases and sales, the object being to inspire similar buying or selling on the part of people who see prices going up or down and wish to participate in the advance or decline, as the case may be.

The manipulator is able to advance prices by purchases but if he is unable to sell out before the price has declined to its previous level he makes nothing by the transaction. The manipulator always expects that his selling will have a less effect on prices than the buying. Otherwise he gains nothing in the transaction.

172. *Varieties of foreign exchange.*—There are four different varieties of sterling exchange quoted above. Cables we have already described as transfers of credit which take place within an hour or two.

Dealers who have sold time drafts on London without having deposited credits there sometimes postpone the forwarding of funds until the drafts have reached maturity. They do this hoping perhaps that the market will decline before the maturity date and thus enable them to purchase exchange at a greater profit. Having waited so long without purchasing demand sterling they are obliged to go into the market for cables at the last moment. It will be noticed that the price of cables is twenty points above the price of demand sterling. This difference represents the price of cable messages and also the interest for six or seven days. The dealer who sells a demand draft knows that the funds cannot be called for in London until the draft has reached that city by mail, which at the very best must require at least six days. In the meantime his London account is drawing interest.

173. *Demand sterling.*--Demand sterling represents a draft which is payable on presentation and de-

mand. It will be noted that there is a difference of five points between the quotations at opening and closing. This difference is accounted for by the difference in quality of the drafts in the matter of security. Drafts drawn by the best known and most reliable institutions command a slightly higher price than those issued by weaker firms. Bank drafts command higher price than commercial drafts accompanied by bills of lading and other documents. The price of the ninety day drafts is nearly 2 cents per pound sterling less than for demand drafts. This difference is accounted for by the fact that the purchaser of the draft must wait ninety days before he can demand payment. The 2 cents represents the interest for the ninety days.

A point must be noted here that is of great importance in understanding the use of finance bills. The rate of interest which is to be subtracted from the quotation for demand sterling in order to get the equivalent for ninety days drafts is reckoned at the English current rate of interest, even if the quotations are given out in New York. The reason for this is that the purchasers of the bills may send them at once to London and rediscount them there at current rates of interest and if they choose to realize on the funds may sell demand sterling at the market price, even before they forward the ninety day bills.

174. *English banking customs.*—There exists in England a class of bankers called bill brokers whose function it is to discount time drafts for persons who desire to realize funds immediately and who are willing to pay a consideration to avoid waiting until the maturity of drafts. So universal is the custom in England of drawing drafts for accounts payable that the rate of discount is more important than the rate of loaning

funds. Most English business men have no direct relations with banks but deal through these bill brokers in much the same way that in legal matters English people deal directly with a solicitor who represents a barrister, who is the one who appears in court and actually handles the case. The rate at which the long bills can be discounted in London depends very closely upon the official rate at the Bank of England.

Very few of the bill brokers expect to hold the bills until maturity, but they expect to rediscount them at one of the large banks; their profit lies in the difference between the discount which they get from the customer and that they have to pay the bank. The large stock banks of London are under normal circumstances willing to discount bills at about ½ per cent less than the Bank of England. Therefore the official bank rate is nearly always higher than the actual rate.

The official rate of the Bank of England has such an important effect upon credit conditions in this country that it is worth while to understand the mechanism by which the relation is kept so close.

175. *Finance bills.*—Interest rates in the two countries are equalized by means of finance bills. A finance bill is a draft drawn by a banker in this country upon a foreign bank for the purpose of realizing funds here for the time being and with the intention of meeting the draft at maturity by the purchase of demand sterling or cables. It is simply a method by which a banker borrows money in a cheap market and loans it in a dear one. A concrete case will make the subject clear.

Suppose the actual rate of discount in London is 5 per cent and that the rate in this country is 6 per cent. If a banker is able to borrow funds in England and reloan them in this country he will be able to make a profit of 1 per cent per annum, less the expense of doing business. A banker desiring to engage in this transaction is not obliged to actually borrow the funds in England and ship the gold to this country. He can accomplish the same purpose with less expense and loss of time by drawing a ninety day draft against a London bank and selling it in the foreign exchange market and loaning the proceeds at the prevailing rate. The price he will realize for the ninety day draft will be the price of demand drafts less a discount equivalent to the London rate, as we have explained above in connection with the quotations on ninety day drafts.

It is not necessary that the banker have a deposit credit abroad; under the conditions mentioned it would be very unprofitable for him to have a deposit when he might loan funds to such advantage in his own country. This lack of deposit credit does not deter him from drawing drafts upon the London bank if he can make some arrangements with the bank for accepting the draft so presented in order to give it negotiability with the bill brokers. At the expiration of the ninety days, however, he is obliged to have the funds in the London bank to meet the draft. These funds he provides by purchasing demand sterling a week or so before maturity in order to give the draft plenty of time to reach England before the draft is presented; or, if he has waited too long, he must buy a cable.

176. *Profit on finance bills.*—The amount of his profit depends entirely upon the difference between the proceeds realized from the sale of the ninety day draft (which are near the face of the draft, as the discount rate in England is low), plus the interest he has gained by loaning the proceeds, and the price which he must pay for the means of covering the draft at maturity,

plus the commission for acceptance payable to the English Bank, and the British Government tax on bills.

The banker who issues finance bills is forced to become a speculator in sterling exchange because his profit depends upon the price at which he can buy demand sterling or cables eighty to ninety days after the date of issue of the finance bills. If he wishes to make sure of a profit and shift the risk to others who are more speculatively inclined or who are better able to forecast the conditions of the supply and demand in the foreign exchange market in the future he may make a contract at the time of issuing the finance bills for demand sterling eighty days after at a certain fixed price. The issuing of finance bills has the same effect upon the market value of foreign exchange as bills rising out of commercial transactions. If they are issued in large amounts at any one time they depress the market, but when the time of maturity of these bills approaches, the purchases of demand sterling to cover stimulate the market artificially.

If the condition of the market is such that gold imports are imminent the issue and sale of finance bills is likely to reduce the price of bills just enough to bring about the import of gold. In this case the final result is exactly the same as borrowing money abroad and shipping it to this country for loaning purposes.

In spite of this very effective method of equalizing interest rates between different countries there are times when the discrepancy between the rates is very great. This is accounted for by the fact that unusual conditions exist in one country or the other. The defects in our currency system, of which much is to be said later, are responsible for great variations in the interest rate in New York. It has been said by financiers of authority that New York can never hope to become the financial center of the world or compete with London in that respect as long as it is possible for the rate on call loans to exceed 100 per cent, or so long as it is possible for a condition to arise where a premium is paid for currency. The profits from the issue of finance bills and from other international financial transactions are so small when reckoned in per cent that the variations of our money market destroy the delicate adjustment by making such operations too speculative and risky.

The great advantage which London possesses over every other financial center is stability. Bankers can always depend upon being able to realize funds upon satisfactory collateral in London and take no risk of having their transactions absolutely blocked by a sudden money panic.

177. *Foreign department of a bank.*—In recent years there has been a great increase in the foreign business of banks and many foreign departments have been established. This has been due to the rapid extension of our foreign commerce and the large number of Americans traveling abroad, giving rise to a demand for banking facilities to expedite the forwarding of funds and the collection of drafts. Competition between the banks has raised the price paid for commercial drafts drawn by exporters, at the same time it has lowered the price of drafts and banker's checks sold to importers.

The advantages to a bank arising from the maintenance of foreign department are, according to Margraff:[1]

1. The foreign department affords facilities to the general clientele of the bank to transact all its banking business with the bank, thereby avoiding the possibility

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[1] International Exchange: p. 14.

of losing a profitable account that is open to successful solicitation by a competitor.

2. Serves as a valuable auxiliary through the medium of advertisements and personal invitation to attract depositors.

3. Commands prominence of the name of the bank among New York bankers, by whom its foreign exchange is purchased, and among bankers throughout the entire world, with whom accounts are kept, and by whom drafts against its letters of credit are negotiated.

4. Practically converts the bank into an international banking institution, thereby vastly increasing its field of operation, by placing it in close touch with the long-established monetary centers of the world.

5. Affords the bank an opportunity of placing loans, at remunerative rates of interest, in European money markets when favorable conditions prevail, by the purchase of bills of exchange as an investment.

6. Affords the bank an opportunity of borrowing funds by means of finance bills in any monetary center of the world.

The foreign department of a bank usually transacts the following business:

1. Sells letters of credit to travelers and commercial houses.

2. Sells drafts to persons desiring to send money abroad.

3. Buys drafts drawn by exporters on foreign consignees.

In addition to these transactions, the possession of a foreign department gives the large international banker a chance to borrow money abroad to loan at a higher rate of interest at home by means of finance bills, or to invest funds in sterling bills of exchange and thus realize a higher rate of interest than he could get by loaning at home, or to engage in profitable arbitrage transactions.

178. *Traveler's letters of credit.*—So many Americans travel abroad in these days that there is a large demand for letters of credit. It is so much more convenient for people to obtain these letters from banks with whom they have an account that if they are compelled to get them from other banks they are likely to transfer their accounts to those banks.

Letters of credit may be issued in three ways:

1. The purchaser buys the letter outright and pays cash for it at once. The banker sells it to him at the selling price of demand exchange for that day plus 1 per cent commission. Thus a letter for £1,000 with demand sterling selling at $4,8550, would cost $4855 plus $48.55 or $4903.55.

2. If the applicant is a depositor enjoying high credit, the bank is willing to issue to him a letter without payment until the customer has drawn money upon the letter and the drafts have been received by the selling bank.

3. If the applicant is not a depositor or one having sufficient credit, the bank will issue a letter upon the deposit of collateral security to secure the amount.

Under the last two methods, the customers are not debited with the amounts until the drafts which they have signed to draw out the money abroad have been returned to the bank. These drafts are charged at the current selling rate of sterling exchange plus 1 per cent commission plus interest on the amount for thirty days while the draft is coming from England and while the remittance to cover same is going.

A bank can place itself in position to sell letters of credit by making arrangements with a London banker who has a large number of correspondents over the world to cash drafts drawn by the holders of letters. A specimen copy of the letter with the signatures of the manager of the department is sent to every correspondent of the London banker.

When a person presents a letter of credit obtained from a Philadelphia bank addressed to the London City and Midland Bank and its correspondents to the Deutsche Bank in Berlin, for instance, they will compare the letter with the specimen on file, then they will write out a draft on the London City and Midland Bank which they will ask the person presenting to sign. If the person has asked for £10, they will give him for the draft the amount in marks which they are paying for sterling drafts on that day. If the price of sterling drafts is M 20.43 per £, the person is entitled to M 204.30 for the £10 draft which he signed and which was endorsed on the letter of credit.

The reason why banks are always so willing to cash letters of credit is because of the great demand for sterling exchange everywhere. When the bank has bought a draft for £10, it sends it to London for credit and can immediately sell a draft for £10 against this credit.

The London City and Midland, when it receives the draft from the Deutsche Bank, credits it to their account and charges it against the Philadelphia bank. The Philadelphia bank must provide funds in London by buying sterling exchange at home.

179. *Commercial letters of credit.*—These are used by importers to purchase goods abroad. By means of them merchandise can be purchased in any part of the globe on a cash basis, although actual payment of the

cost of the goods imported will not be demanded of the importers, by the banker furnishing the credit, until maturity of respective drafts drawn by the exporters. Advance orders may be given by importers with exporters for the manufacture of goods, according to the specifications and requirements of the importers, without prepayment of the value of the goods ordered, or a cash deposit, the commercial letter of credit being sufficient security in the hands of the exporters.

The exporters are benefited because they receive cash for all merchandise ordered under the letter of credit on the date of the shipment; that is to say, drafts covering the cost of merchandise, even if issued for a specified time after sight can be converted into cash by discounting such drafts with their local bankers. The buyer of the letter of credit signs an agreement to reimburse the bank for the drafts drawn under the letter at the current rate of exchange and to pay a commission of 1 per cent on drafts at sixty days 5 sight. The fact that the drafts are drawn at sixty days obviates the necessity of charging interest, for the London bank does not pay the drafts until sixty days after the goods have been shipped and the bank notified that the draft has been made.

When the foreigner has the goods ready for shipment he draws the draft and discounts it with the local banker, the letter of credit making it secure and worth more than an ordinary commercial draft. The discounting bank either holds it until maturity or sends it to London for discount. Before it is due the American bank provides funds in London to cover it.

180. *Buying foreign exchange for investment.*—Suppose the rate of interest at home is very low at the same time it is high abroad. The international

banker finds that he could make profit by loaning in the better market. He can do this very easily by purchasing "long" bills and holding them himself instead of sending them abroad for discount. This he could easily do by detaching the *first* of exchange (foreign bills are always made out in triplicate) and instead of indorsing it for discount, would write across the face: "For acceptance only." The correspondent bank receiving same would secure acceptance and hold it.

At the end of the period for which the bill ran, or at any time before, if the holder found that he needed the funds, the holder could take the *second* of exchange, endorse it for collection and send it. The *first* containing the acceptance and the *second* containing the endorsement would together constitute a complete bill. The correspondent would collect (or discount them if they were not yet due) and place the proceeds to the credit of the sending bank.

Suppose demand sterling were selling at $4.85, the Bank of England rate was 6 per cent and the average bank rate in this country was 4 per cent. In this case the price of bills would be:[1]

Open discount rate in England 5½%.
90 days' interest at 5½ on $4.85 = .0666
British Bill Stamps = .0020
Commission 1-40% = .0012
.0698

Therefore the price of ninety-day bills would be $4.85—.07=$4.78.

Suppose the banker purchased £10,000 of ninety-day bills at $4.78; the cost would be $47,800. At the end of the ninety days he would be able to sell £10,000 of demand sterling, say at $4.85 (if the price had not fluctuated), or a total of $48,500. His profit would be 48,500—$47,800 or $700. If he had loaned the $47,800 at 3 per cent, he could have gained in interest only $358.50. The net profit on the exchange would therefore be $341.50.

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[1] Margraff, "International Exchange," p. 133.

181. *German and French exchange.*—The monetary unit of Germany is the mark which contains one hundred pfennings. Measured in gold, it is equivalent to $.238309 in United States money. The quotations for exchange in marks, however, are quoted, not as the price of one mark, but as the price of four marks. For example, demand sterling was recently quoted at $.94 7-16 less 1-32, meaning that drafts on German banks were sold at $.94 7-16 less 1-32 for every four marks. "Less 1-32" means that 1-32 per cent of $.94 7-16 must be deducted from $.94 7-16 to get the true quotation. Expressed decimally the quotation would be .94 .0043 less .0003 or $.9440.

In foreign exchanges the expression "per mille" is often used. One-half per mile (written 1-2 0-00) ½ per thousand or 1-20 per cent. It is a more convenient term that fractional percentages.

The French monetary unit is the franc, divided into one hundred centimes. Measured in gold, it is equivalent to $.19295 in our money. The quotations for French exchange are given exactly opposite the English or German—that is, they quote the number of francs which one dollar will purchase. A recent quotation for demand exchange on Paris was 5.16 7-8 less 1-32. This means that 5.16 7-8 less 1-32 per cent francs will be sold for $1. It will be noted that the larger the figures, the lower the quotations and vice versa: 5.15 is a higher quotation than 5.16.

The quotations vary 1-8 per cent or in intervals of 5-8 centime (because 5-8 centime is approximately 1-8 per cent of 5.15 francs, the basis of computation). The intervals begin with 5.15 and go down thus: 5.15 5-8, 5.16 1-4, 5.16 7-8, 5.17 1-2, 5.18 1-8, 5.18 3-4, etc. The reason for this is the fact that formerly 1-8 per cent was close enough for the brokers and was a convenient figure in arbitrage transactions. Recently prices are quoted closer and the quotations are raised and lowered by deducting or adding 1-16 per cent, 1-32 per cent or 1-64 per cent.

In order to deal with such awkward quotations it is necessary to convert them into decimals, for it is impossible to find, for instance, 5 per cent on 5.16 7-8 less 1-32. To convert 5.16 7-8 less 1-32 into a decimal, we would first find the decimal equivalent of .007-8 = .00875; then we would find 1-32 per cent of 5.16 7-8 = .00156 + 5.16 + .00875 = 5.16875. To this we must add .00156 = 5.17031. It is added because "less 1-32 per cent" means a lower quotation; since the higher the figures are the lower the actual quotation must be, the reason for adding the decimal instead of subtracting it is clear.

To convert a quotation expressed decimally to the regular fractional form is more difficult. Let us take, for example, 5.1925.

The next nearest quotation fractionally is 5.19 3-8 (see list above) or 5.19375, which is too large by .00125. .00125 is equivalent approximately to 1-32 per cent of 5.19, so we would complete the quotation by reducing the 5.19375 by 1-32 per cent, making it 5.19 3-8 plus 1-32, plus representing a lowering of the actual quotation.

To find the value of a 90 day bill on Paris for 525 francs if demand exchange were at 5.16 7-8 less

1-32 (5.17031 as above) we would calculate the discount and expenses:[1]

	Francs.
Commission 1-40% or ¼% (% = PER MILLE)	.13
French Bill Stamp 1-20% or 1 20-00	.26
Discount 90 days at 2¾%	3.60
Francs	3.990

Price of demand exchange	517.031
Price of 90-day exchange	521.021
Quotation per $1.00 worth of exchange	5.21

3.99 francs are added to the price of demand because 90 day exchange is worth less than demand and the lower the quotation, the greater the number of francs given for $1.

182. *Arbitrage.*—The arbitrage transaction consists in buying or selling exchange on a certain center indirectly through a third city. For example, a banker wishing to increase his London balance would buy Berlin exchange and instruct his German correspondent to use the proceeds of the bill in purchasing sterling in Berlin, thus increasing his London balance by the triangular operation.

Suppose a banker had an opportunity to sell a draft on Paris but had no funds there. It would be very easy for him to sell the draft, purchase with the proceeds sterling exchange, remit it to London with instructions to purchase Paris exchange in London with the proceeds and forward for credit to the Paris correspondent to cover the draft sold at first.

Suppose the quotations for the day were as follows:

Sterling exchange in New York	$ 4.84
Paris exchange in New York	5.17½
Francs in London	25.25 per £

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[1] Margraff, "International Exchange," p. 142.

If he sold a draft for 25,250 francs, he would receive therefrom $4,879.23 (25,250 divided by 5.175). To cover this draft in Paris by French exchange purchased in London, it would be necessary for him to buy sterling exchange at $4.84. If 25.25 francs in London sold for £ he would be required to buy £1,000 in order to get 25,250 francs. This would cost him in New York at $4.84, $4,840. His profit would be:

Proceeds	$4,879.23
Cost	4,840
	$ 39.23

His London banker would probably charge him 1-40 per cent for doing the business, which would cut down his profit by $1.21, leaving it net at about $38.00.

The quotations in New York for continental exchange are influenced largely by the price of sterling exchange, both in New York and in Berlin or Paris. If from any cause the price of continental exchange in New York should tend to fall to a point where there would be a profit in the arbitrage transaction, the demand for it on the part of the bankers who wish to make a profit from arbitraging would immediately force up the price again. Therefore, there is a certain relation existing between all the quotations of foreign exchange. When there is neither profit nor loss from arbitraging, they are said to be at par.

For instance, if demand sterling in New York were at $4.8665, the *unit par*, and in Berlin at 20.43, also the *unit par*, the commercial par of marks in New York could be found by dividing 4,8664 by 20.43, equals .2383, the value of one mark exchange in New York; multiply it by four (.2383x4=.9582) and we have the commercial par of exchange for mark exchange which is also the mint par.

CHAPTER X

PRODUCTION OF THE PRECIOUS METALS

183. *World's stock of gold.*—The total amount of gold estimated to have been produced in the world within historic times is $10,948,899,000. The amount of gold at present in use throughout the world as money is $5,685,700,000; thus leaving over $5,000,000,000 to be accounted for. Of this amount it is calculated that two and a half billions have been consumed in the arts, and fifty millions have been lost through the abrasion of coins; and that $1,300,000,000 has been exported to the Asiatic countries where it has been hoarded and passed out of monetary use. This leaves unaccounted for about $1,800,000,000, which probably represents the gold that has been lost in transporting it across the sea, or has been hidden away in the earth, or is at present in hoards of which no record is kept.

184. *History of the precious metals.*—According to the figures of the production of silver throughout historic times it is estimated that there has been produced over $12,000,000,000, which is accounted for as follows: Consumed in the arts, $1,750,000,000; devoted to monetary uses, $3,213,000,000; exported to India and China, $1,990,000,000. This leaves unaccounted for the sum of five billions.

In ancient times there was considerable production of the precious metals, mostly from the mines of southern Europe. These sources were worked by slave labor almost exclusively, and the productions found their way into great hoards which served no valuable purpose other than to provide a visible evidence of the wealth and power of the owner. Only a small part of the existing stock of precious metals was used as a circulating medium, and of course at that time its use as a basis of credit was entirely unknown.

> Gold and silver were regarded as an end, not as a means; as treasure, not money. They were distributed, not by trade, but by war. It was the hand of the conqueror that stripped them from palaces and temples. If they were taken from the store of monarchs, it was not to freight the caravans of commerce, but to fill the chariots and mule carts, to load the sumpter horses or the camel trains of a victorious army.[1]

After the fall of the Roman Empire the mines fell into the hands of the barbarians in their southern migrations and ceased to be worked. From that time on until the discovery of America the quantity of precious metals in Europe decreased rather than increased. Large quantities were used in decorating the churches. There was probably even less used for monetary purposes than the limited amount which had been so used in the ancient times.

185. *The Feudal Period.*—Under the feudal system society was organized on a basis on which was required very little exchange of products, and most of what exchange existed was done on a barter basis. Taxes and payments to the lord of the manor were made in produce. The royal court was maintained not from money taxes collected, but from the produce of the crown lands which the king received as the lord of the manor. Wars were conducted without the use of money; the soldiers were equipped from their own re-

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[1] F. A. Walker, "Money," p. 108.

sources and were sustained from the forage of the country traversed in campaigns.

186. *Discovery of America.*—One of the most important effects of the discovery of America on European economic conditions arose from the quantities of silver which began to flow in an increasing stream from the Spanish colonies to Spain and from thence to be disbursed throughout Europe. The eager quest of the early explorers for the precious metals can be better understood when we know that the value of silver was many times its value to-day, and that the precious metals were about the only property which could be profitably transported during these times when transportation was so difficult and expensive.

When Columbus and the explorers who followed him set out on their quest for undiscovered countries, it was largely with the hope of finding gold and silver. Gold was found at the outset in Hispaniola, the first island acquired by Columbus for Spain, but even with the forced labor of the natives it was obtained in only limited quantities. The quest for gold, at first disappointed, was more amply rewarded after the conquest of Mexico by Cortez, about 1520, and of Peru by Pizzaro, about 1532. The treasures which had been accumulated by many years of mining by the simple but partly civilized peoples of these countries were poured into Europe and were the subject of most fabulous estimates as to their amounts. Thus, the ransom of the Inca of Peru extorted by Pizzaro—a sum equal to about $4,000,000 gold of our money, and an additional sum in silver—was a large amount to be distributed among a small body of adventurers, but did not add greatly to the monetary resources of the world. It was the discovery of rich silver deposits of the mountain of Potosi, in Peru, about 1545, which revealed the New World as an important producer of the precious metals and especially of silver. Up to this date (1493–1545) the production of gold preponderated in the proportion of about $220,-

000,000 to $144,000,000 in silver; but from that discovery, followed by many others, began what Leroy-Beaulieu designates as "the first age of silver." It was an age which lasted for nearly three centuries, terminating about 1840, and which brought into the commercial world nearly $6,000,000,000 of silver against less than half as much gold.[1]

187. *Effect of silver from America.*—The effect of the American silver upon the economic conditions of Europe was revolutionary. Payments from the tenants to the landlords for the use of the soil had been made either in produce or in labor, a system which reduced the tenant to a condition not far removed from that of the slave. Commerce was so limited that every community had to be practically self-supporting, and its consumption was limited to the articles which could be produced in the immediate vicinity. The lack of commerce made it possible for famine to exist in one county while great plenty existed in the neighboring county.

The transmission from payment in kind to money payment, which soon profoundly altered the relations between the lords and tenants, making the latter much more independent, was not so much due to the greater abundance of money as it was to the effect produced by the new silver on prices of all commodities. The Spaniards to whom this new silver first came, appeared in the markets of Europe as purchasers of goods, thus creating a steady demand for export. The rise of prices and the steady market gave a stimulus to industry. Originally money had been used chiefly as a store of value and had been hoarded up as a protection against misfortune. This was justified from the conditions of the time which made it difficult to accumulate any other form of property. The land was not bought and sold as to-day, but was considered permanent in the possession of families who held it under various forms of limited title from the king or lord.

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[1] C. A. Conant, "The Principles of Money and Banking," p. 86.

There was very little opportunity to acquire productive capital. What little invested capital there was in the form of flour mills, etc., was held by the lords under the same conditions as the land practically. Money was therefore about the only form of property in which savings could be invested. There was no incentive to circulate money except when misfortune forced the possessor to release it for the necessities of life, or when it was extorted by force.

188. *Increased circulation of money.*—The rise of prices accompanied as it was by the growth of commerce and by the commutation of money for labor dues had the effect of putting money into circulation. As the opportunities increased for the investment of funds in some form of productive property, the tendency to hold money grew less and less especially as the increase in the value of goods and the decline in the value of money made the latter very unprofitable and a losing investment.

It is doubtful whether the new silver which flowed into Europe, when measured in terms of value, increased the amount of money. An ounce of silver was worth so much less that the increased quantity had little more power to perform money work than the smaller quantity had before. The effect was produced by the change of prices and by the consequent increase in the circulating power of the stock of silver already existing in Europe.

189. *Discovery of gold in California.*—The quantity of gold and silver in the world was subjected to another great change in the middle of the nineteenth cen-

tury. On January 28, 1848, a workman named Marshall, while erecting a sawmill on the American fork of the Sacramento River, discovered gold in the mill race and within three years from that time California had not only become a part of the United States, when it had previously belonged to Mexico, but had also been admitted as a State under the Compromise of 1850. Gold had been discovered in Australia in 1823, but mining had been discouraged by the Government. Under the stimulus of the California gold discoveries, the Government changed its attitude and the rush of gold seekers to Australia in the early 50's was almost as great as that to California. As a result of these discoveries the annual average production of gold increased from about $16,000,000 before 1850 to nearly $130,000,000 between 1850 and 1870. The effect upon prices may be seen in the price tables of that period.

190. *Effect of California gold.*—Owing to the fact that the monetary circulation in this country during that period consisted almost entirely of bank notes based on the specie reserve, the effect of the new gold was not so pronounced as it would have been had the circulation consisted entirely of specie. The gold which was not required for circulation in California and which was not exported was used to strengthen the bank reserves and to provide for the increased circulation required by expanding industries. The tendency of the sudden addition of so large a quantity of gold to the world's supply would have been to raise prices very sharply, had it not been diverted by these considerations.

After 1870 the annual production of gold declined steadily for twenty years and had more serious economic effects than the increase in the previous twenty years had had. The declining prices which it occasioned gave rise to the silver question which agitated the world for more than ten years.

191. *South African gold.*—The discovery of gold in South Africa in 1889 and in the Klondike region a few years later brought another period of increased gold production and a rise in prices. These later discoveries, combined with the invention of new processes for the extraction of gold, have given the science of money an entirely new turn within the last ten years.

192. *Production of gold.*—The following table shows the production of gold and silver from 1492 to 1906:[1]

	Gold.		Silver.	
	Total.	Annual Average.	Total.	Annual Average.
1500–1800	$2,371,000,000	$ 7,900,000	$4,863,000,000	$ 16,210,000
1801–1850	798,000,000	15,960,000	1,359,000,000	27,180,000
1851–1870	2,596,000,000	129,800,000	879,000,000	43,900,000
1871–1890	2,211,000,000	110,500,000	2,218,000,000	110,900,000
1891–1900	2,101,000,000	210,100,000	2,089,000,000	208,900,000
1901	262,000,000		223,000,000	
1902	295,000,000		215,000,000	
1903	325,000,000		220,000,000	
1904	358,000,000		226,000,000	
1905	379,000,000		203,429,400	
1906	400,242,100			
1907	410,436,000			

193. *Origin of gold.*—The specific gravity of gold is very high and is exceeded by very few metals, most of which are exceedingly scarce and valuable. The theory is that when the earth was thrown off from the sun it was in a gaseous state. The gradual cooling of the mass and the dispersion of heat permitted the formation of liquids and finally of solids. The first solids to be formed were the metals of the highest specific gravity which naturally sank to the center of the earth through the gaseous and liquid medium by the force of gravity. As the cooling process continued and the

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[1] Report of Director of the Mint.

earth took solid form, there were tremendous upheavals of the surface. The enormous heat at the center formed gases which in escaping threw up to the surface molten matter containing gold in combination with other elements. This accounts for the presence of gold in mountainous localities where the upheavals have been severe and gives rise to the theory that at the center of the earth gold exists in large quantities.

194. *Sources of gold.*—Until within recent years practically all the gold produced was taken from gravel deposits. The free gold had been washed out of the rock by erosion, had been carried down in the streams and because of its great weight had sunk to the bottom of the stream not far from the place of its origin. These small particles of free gold were separated from the mass of sand and gravel by the simple process of "panning." The mass was mixed with water and gradually shaken until the sand had been washed away, leaving only the heavier materials behind. The fine particles of gold were separated from the gravel by means of quick silver, for which it has a very great affinity. The gold was then separated from the quick silver by filtering the latter through heavy skins.

195. *Improvements on placer mining.*—This simple process has been developed by the use of machinery into hydraulic mining and "sluicing." A powerful head of water is obtained by diverting a stream of water from the mountains by conduits. This head of water produces a jet which is directed against the banks of gold bearing earth, tears them down and washes them into the sluices. In these sluices are built artificial obstructions which are called riffles and which catch the particles of gold as they sink to the bottom. The gold

is then recovered by the use of quick silver, as in panning.

196. *Dredging.*—Another modern method is that of dredging. Huge dredgers follow the beds of streams, scraping up in huge shovels the gold bearing earth, washing it out inside the dredge and passing out the earth and water behind as the dredge moves on. This wholesale machine method of placer mining has reduced the cost of producing gold under this process from $5.00 to $8.00 per ton of material handled to 1½ to 8 cents.

197. *Quartz mining.*—Other processes of mining have been so developed that at the present time the largest portion of the gold produced is taken from the quartz. Gold occurs in the rock either in the form of free milling gold which requires simply to be separated from the rock by a mechanical process or it occurs in chemical combination with other elements which requires special treatment to be recovered. The quantity of gold which can be produced by the placer process is limited because the beds of streams can be exhausted very soon. The opportunities for extracting the gold from rock formation has made the future production of gold very much more certain and reliable.

In extracting gold from quartz it is first crushed with powerful machinery. The question of power to run the ore crushing machines has been a very serious one because the mines have usually been in inaccessible places remote from coal deposits. The question has been solved in recent years by the development of electrical transmission so that the energy in the mountain streams can be converted into electricity and transmitted hundreds of miles by wire to the mines. If the ores are refractory, containing sulphur and other troublesome elements, they must first be roasted to expel these elements in the form of gas. After roasting chlorine is added, which combines with the gold, forming chloride of gold. Water is then added to the mass and the chloride of gold leached out. The pure gold is precipitated from the chloride by means of sulphate of iron. Cyanide of potassium is another medium used in extracting gold. The gold is precipitated from the solution either by zinc shavings or by electrolysis. In the latter process gold is deposited on aluminum plates from which it can be easily removed.

These processes described have made it possible to treat ores of a very low grade; in fact it has been possible to work over profitably the "tailings" from old placer mines.

198. *The Comstock Lode.*—The "Comstock Lode," one of the most famous of the silver mines, was also a large producer of gold. Although discovered in 1858 by a Virginian miner named Finney, the lode took its name from a high-handed and reckless adventurer named Henry Comstock. It was gold which was first taken out, and before mining for silver was systematized a serious battle for control of the country had to be fought with the Indians at Pyramid Lake. Then moved across the scene Adolph Sutro, with his finally successful plan for a tunnel to carry off the waters; William Sharon, agent of the Bank of California and railway promoter; John Mackay, J. G. Fair, James Flood, and William O'Brien, as purchasers of the Virginia Consolidated and discoverers of the "Big Bonanza"; after 1877 came the falling off in the product and the gradual decline of the mine. Up to 1880 the total product of the Comstock mines was computed at $174,000,000 in silver and $132,000,000 in gold. The highest yield was $38,000,000 in 1876. In 1880 the product had fallen to $5,100,000 and in 1881 to $1,000,000.

The Comstock Lode was typical of the highly speculative character of mining enterprises. Of 103 mining enterprises started up to 1880, only six proved profitable. They yielded a product of $115,900,000 for an expenditure of $18,300,000. The other ninety-seven mines, even in this rich district, showed a loss of $43,400,000. While cost of production must in the long run influence the volume of the precious metals taken from the mines, the speculative character of mining has made this influence difficult to trace and slow in its operation. It is probable that the total stock of gold and silver taken from the earth has been extracted at a cost in labor several times the value of the metal obtained. Where a few have obtained rich prizes, many more have suffered disappointment and ruin. It is necessary not merely to obtain the metals, but to obtain them in proportions which compensate for the labor expended. They must, as Hauser expresses it, fall within the "limit of exploitability." A summary of the economic results in the Californian mines, made by Dr. Reyer, after the study of actual conditions, puts the case thus:

"Even though the dividends in particular cases are large, they by no means cover the deficit of all the unprofitable undertakings. In fact, the production of gold here, as in Australia, has always yielded a net loss. This may be explained as follows: A few dozen mines produce the great mass of gold. They make large profits and determine the price. Their success attracts capital without end to similar undertakings; these are given up after awhile, and the money is returned to other really productive branches of industry. But the temptation from the fortunate gold producers continues, and causes new capital constantly to rush to its destruction—the same phenomenon that is seen in games of chance. A few win a great deal; hundreds lose all they have. The business, on the whole, is a losing one." [1]

[1] C. A. Conant, "The Principles of Money and Banking," pp. 92–3.

CHAPTER XI

BIMETALLISM

199. *Bimetallism defined.*—Bimetallism is a monetary system under which a government permits anybody to bring gold or silver to the mints and have it coined into money, which shall be legal tender for all purposes. By thus permitting the coinage of metals without restriction the relation between the values of coins and bullion is automatically regulated. A demand for money will tend to increase its value compared to bullion, or as it appears to the public, the price of bullion falls slightly. Even a very small decline would be sufficient to induce somebody to convert bullion into coins through the mint and thus re-establish the equilibrium. Prior to 1816 countries were on a bimetallic basis, admitting to their mints both metals at a fixed ratio. In this country the first coinage laws established a double standard; the dollar was to be composed of either 371.25 grains of silver or 24.75 grains of pure gold, the ratio as to weight being fifteen to one.

200. *Difficulties of bimetallism.*—In our study of the standards in a previous chapter we have seen how the difference in mint ratios between the different Governments created a condition which has made it impossible to keep gold and silver coins in circulation concurrently. In fact there has been no time since the founding of our Government when it could have been said that we were actually upon a double standard. The truth is that at first we were upon a silver standard;

then from 1834 to 1862 we were upon a gold standard; then from 1862 to the resumption of specie payments in 1879 we were upon a paper money standard; from 1873 to 1879 we were nominally upon a single gold standard and after the latter date actually upon a gold standard.

In 1816 England adopted a single gold standard and was the first country to do so. The other countries of Europe and the United States continued nominally upon an alternating standard until the 70's.

Before the beginning of the nineteenth century bimetallism in Europe was practicable because at that time trade had not been developed to a point where the different ratios in the different countries produced any appreciable flow of metals. It is not until values and prices respond readily to conditions of supply and demand and until there is sufficient commercial intercourse between localities to equalize values that difficulties concerning the standard arise. Prior to the nineteenth century there were so many interferences with the natural play of supply and demand that the values were mostly conventional rather than competitive.

201. *Advantages of bimetallism.*—Notwithstanding that practically all of the nations of the earth excepting England were on a bimetallic basis before 1870, the system could not be called international bimetallism because of the different ratios of the various countries. Those authorities who advocate bimetallism do so on the ground that it assures a more stable standard than either metal if used exclusively. It is argued that if the production of either metal should diminish compared with the other its natural rise of value would prevent its being taken to the mint for coinage; the monetary demand of the country would therefore fall upon the

other metal according to Gresham's Law which is a statement of the tendency of cheaper money to drive out the dearer. The increased demand for the more abundant metal transferred to it from the scarcer metal would tend to restore the equilibrium between the two.

For instance, if under the conditions just mentioned it had been gold that had grown scarcer and more valuable, under bimetallism the money demand would have been transferred to silver until its bullion value again was restored to an equality with gold. If there had been a single gold standard under the same circumstances the increased value of gold would have resulted in an appreciating standard and a consequent fall in prices. Under the double standard there could be no rise of general prices until the quantity of both gold and silver had altered sufficiently to produce this result.

202. *International bimetallism.*—The argument of the advocate of bimetallism is theoretically sound if the system is adopted by all countries at the same ratio. If only a few countries have a bimetallic standard, the changes in the quantity of the production of either metal, instead of throwing increased demand upon the other metal, would tend to cause an export of the scarcer and an import of the more abundant metal so that the system would not only fail to prevent fluctuations of prices, but would bring about conditions which might lead to a grave crisis.

203. *Disadvantages to commerce of different standard.*—There are a great many advantages in favor of one common par of exchange between all countries having extensive commercial relations. The difficulties encountered when the standard of the trading countries is different is apparent in the silver standard countries

to-day. Importers of goods from silver countries are forced to become speculators in silver. If they force the dealer with whom they contract for goods to quote prices in gold they simply shift the speculative risk to his shoulders. It is axiomatic that wherever there is risk and uncertainty in making contracts and doing business the volume of business will diminish and the expense of doing it increase.

More serious than the complications in importing and exporting merchandise is the hindrance which different money standards place in the way of the international movement of capital. Countries on a silver basis when they wish to place a loan in the world's money centers are obliged to promise payment in gold; since the income upon which they depend to pay interest and principal comes to them in silver, they are likely to face grave problems at any time, should the values of gold and silver standards change. Every decline in the price of silver in the world's markets means to the silver standard countries an appreciation of gold and greater difficulty in payment of debts.

Private enterprises are restricted in the same way. If to the uncertainty of investment in the new country there is added the uncertainty of the value of profits earned on capital sent to those countries, the investments offered to attract foreign capital must be more than other countries need to offer. The silver standard countries are laboring under a handicap in competition with gold standard countries.

204. *Early attempts at inflation.*—After 1870 there was continuous decrease in the annual amount of gold produced in the world, the result of which was to check the rise of prices and to cause them to decline. In the United States the decline of prices was accentuated by

the contraction of the paper currency of the Civil War Period. This decline of prices was very unwelcome to a large class of persons who attributed it to a scarcity of money. They sought to improve this condition by advocating an issue of additional amounts of paper money. The agitation took shape in the formation of the greenback party in the 70's which was strong enough to force through Congress a bill providing that the retirement of the greenbacks should be suspended and that new issues should be put out. This inflationists' bill was vetoed by President Grant, but the retirement of the greenbacks which had gone on steadily for ten years was brought to an end and the quantity in circulation fixed at the amount at which it now stands, namely $346,000,000.

This attempt to raise prices by artificial interference with the money system of the country was unsuccessful in increasing the paper money of the country, but it was the parent of a movement which sought to accomplish the same purpose with silver instead of paper as the means. But before we discuss the silver question as such, it is proper to study the conditions which led up to it.

Simultaneously with the decrease in the production of gold and the increase in the production of silver the influence of England, which was on a single gold standard, was no doubt the cause which induced the bimetallic countries to demonetize silver at this time.

205. *Demonetization of silver.*—The term "demonetization of silver" signifies the suspension of the free coinage of that metal. When the mints refuse to coin silver bullion into money, the value of that metal is no longer sustained by the demand for it as money. Henceforth its value is determined the same as that

of any other commodity inasmuch as that peculiar demand which before distinguished it from other commodities is now withdrawn. Demonetization does not mean that the metal is no longer to be used as money, for silver is still used in all countries which have demonetized it. The silver coins in a gold standard country belong to the class of credit money instead of standard money. Their value has no relation to the quantity of metal in them, any more than the paper dollar is affected by the rise and fall in the value of paper stock of which it is composed. In making and issuing these coins the Government purchases the metal in the open market and while this demand will have an effect upon the value of that metal, yet it is perfectly artificial and arbitrary.

206. *The Latin Union.*—Prior to 1874 France was the most important bimetallic country in the world. After 1864 France was in league with several smaller countries of Europe; France, Italy, Greece, Belgium and Switzerland. This league was the Latin Union, which was so important an element in the silver discussions of the 90's. France furnished these countries with coins of gold and silver so that for monetary purposes the Union might be considered as one country. The Latin Union, together with the German Empire created a demand for silver which maintained its value for some years in the face of increased production.

In 1871 the German Empire was founded and the monetary system of various countries composing the empire was entirely reconstructed. The free coinage of silver was suspended and supplies of gold were accumulated to maintain the value of all the credit money of the Empire.

France, which had acted as an equalizer of the values of gold and silver in Europe up to this time, in 1874 suspended the free coinage of silver in response to the tendency of the times.

The bimetallist claims that the close correspondence of the market ratio with the French coinage ratio was not fortuitous, but was due to the fact that the money demand for the two metals was kept in equilibrium by the bimetallic law of France. Even after the great influx of gold from California and Australia in the fifties, the market ratios between the two metals fluctuated very little. In the year 1800 the earth was producing fifty ounces of silver to every ounce of gold; between 1852 and 1858 it produced only five ounces of silver for every ounce of gold. Despite this great change in the production ratio, the value ratio of the two metals was only slightly affected. The increased supply of gold after 1850 undoubtedly tended to lessen its value, and for ten years the French mint was busily coining the yellow metal; large quantities of silver were exported to India and the East. Between 1850 and 1865 there happened in France exactly what the theory of bimetallism would lead us to expect, namely, an increased coinage of the cheaper money metal, gold, and a lesser use of the other. However, France did not lose all of her silver even under this great strain; and the two metals of the world retained during this period a value ratio remarkably close to the ratio established by the law of France.

The monometallist meets this argument from French experience in various ways. He first makes an absolute denial of the contention that the so-called "mint demand" has any effect whatever on the value of the metal. No mint, he says, can add the slightest value to any metal; a mint merely puts a stamp upon the coin to signify the quantity of metal it contains, but if a coin is hammered on an anvil its value is not lessened. This is true, but it does not prove that the value of a metal is not due partly to the fact that the mint is open to its coinage. Free coinage makes the value of the metal uncoined practically the same as when coined, and so tends to cause an increased demand for it, thereby increasing its value. A mint does not add value to the metal, but the demand for it, growing out of the fact that it can be freely minted into money, does give it a value which it otherwise would not possess.[1]

207. *Demonetization of silver by the United States.*—Because the United States was on a paper money basis at the time when the European governments were changing to the silver standard, the effect was not immediately felt. In 1873 Congress codified the coinage laws of the country and accomplished the momentous change from a double standard to a single standard without exciting any comment. It is even claimed that the change was effected by the accident of leaving out unintentionally the name of the silver dollar from the list of coins.

The Act of 1873 declares that the gold dollar of 25.8 grains standard "shall be the unit of value." After enumerating the various gold coins that may be minted, it provides for the free coinage of silver "trade dollars," to contain 420 grains standard silver, and for the coinage by the Government of subsidiary silver coins, all these to be legal tender only for amounts not exceeding $5.00. The old silver dollars of 412.5 grains standard is not mentioned; its coinage, therefore, was prohibited by the following: "That no coins, either of gold, silver or minor coinage, shall hereafter be issued from the mint other than those of the denominations, standards and weights herein set forth."[2]

When the redemption of Government paper at par was resumed in 1879 it might have been preferable to take silver to the mint for coinage, but it was found that the privilege had been withdrawn, and the owner of silver was forced to sell the metal in the open market the same as any other commodity. At the time these changes were taking place with reference to the standard the price of silver bullion was $1.298, at which figure the quantity of silver in the dollar was worth slightly more than the gold equivalent. The curtailment of the demands of European countries for silver as money combined with the increased production, and the quantities thrown on the market by France and Germany in exchange for gold caused a decline in the price of silver to set in, which continued steadily year after year until in 1902 it stood at 52.7 cents per ounce, less than half its value thirty years before.

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[1] Johnson, "Money and Currency," pp. 225–6.
[2] Id., p. 242, note 1.

208. *The silver purchase acts.*—The fall in the price of silver stimulated the silver mining interests in this country to activity. They were successful in 1878 in getting passed through Congress the Bland-Allison Act, which required the Secretary of the Treasury to purchase each month in the open market two million ounces of silver which should be coined into silver dollars. In this way the interests sought to substitute an artificial demand for silver which would have been natural if free coinage had not been suspended five years before.

The effect of these purchases was not sufficient to counteract the tendency of the constantly increasing supply and in 1890 the Sherman Act passed, which required the Secretary of the Treasury to purchase each month four and a half million ounces of silver instead of two million and authorized the issue of treasury notes of 1890 to pay for the silver. The effect of this act was to inflate the currency by the addition of both silver and paper credit money—practically an accomplishment of what the greenback party had failed to do in 1875.

209. *Sherman Act one of the causes of the panic*

of 1893.—There is a very general agreement among authorities that the Sherman Act of 1890 was one of the most important causes of the panic of 1893. The act came at a time when speculation had already forced prices to an artificial level and led to great over-expansion of credit. The silver purchase law accelerated this tendency, while at the same time it undermined the foundations of credit. Gold exports began and continued until 1896. The earlier exports of gold came from the vaults of the banks. Soon the banks became unwilling to permit their gold reserves to be diminished in this way and the gold was secured by exporters from the Government treasury. In the Resumption Act of 1879 the Government had pledged itself to redeem the greenbacks in gold whenever presented. Accordingly it was a very simple matter for exporters desiring gold to take greenbacks to the treasury and demand gold for them. This demand grew steadily and finally became so large as to waken the apprehension of the Administration.

When President Cleveland was inaugurated for the second time in 1892 he found himself face to face with an extremely serious problem. The unwise acts in favor of silver were rapidly putting the Government in a position where it could not keep its promises or maintain the foundations of credit, already overburdened at this time.

The Sherman Act of 1890 had been put through Congress by a log-rolling scheme by which the promoters of the McKinley Tariff Bill secured votes by promising to vote for the Silver Bill. This alliance of the Republican party leaders with the silver interests proved in later years to be very embarrassing and required the greatest ingenuity to explain away.

The crisis which arrived in 1893 was the legitimate effect of the monetary and tariff vagaries of the preceding years. There is no doubt that the crisis would have arrived but it is likely that it would have been much less severe and that the period of depression following it would have been much shorter, had the legislation of the preceding years been more scientific.

The distress and suffering caused by the crisis and depression created great discontent among the people and stimulated a search for the causes, so that the blame might be properly placed.

210. *Silver would not circulate.*—It is incredible that the panic of 1893 should have been attributed to lack of sufficient currency in the country, when the real difficulty was redundancy of certain kinds of currency. The coinage of the new silver dollars under the silver purchasing acts of 1878 and 1890 had piled up in the treasury amounts of currency with which the officers did not know how to deal. The coins were so bulky and inconvenient that the people refused to take them in any large quantity. Whenever they were paid out they very soon returned to the treasury in payments made to the Government. So long as the Government had a surplus of revenue sufficient to meet all expenditures including the enforced purchase of silver bullion, there was no immediate cause for apprehension.

The prosperity and good crops of the years 1879–80 created a demand for additional circulation in the western states and the silver dollars found an outlet there.

The movement was accelerated by an offer on the part of the Treasury to buy silver certificates in the west and south in exchange for gold deposited in the sub-treasury in New York. Whenever the rate of exchange was in favor of the west and south, the person desiring to make remittance could save express charges by accepting the Government's offer. In this way the surplus silver in the Treasury was worked off for the time being.[1]

A minor commercial crisis occurred in 1884, the effect of which was to cause a decline in the public revenues. In addition to this shrinkage the percentage of the receipts paid in gold diminished from 75 per cent to 36 per cent of the whole; the silver receipts rose from 17 per cent to 36 per cent; and the balance of 28 per cent was received in greenbacks.

211. *Attitude of banks toward silver.*—The banks at this time had begun to discriminate against the silver certificates. The clearing houses had made a rule that they were not to be received in settlement of balances. However, after Congress had passed a law forbidding national banks to become members of clearing houses which did not receive the silver certificates, the rule was rescinded, but the banks voluntarily agreed among themselves not to make payments in silver certificates. The sub-treasury of New York was a member of the clearing house and at this time in order to prevent the payment of its balances in certificates the New York banks voluntarily turned into the treasury $6,000,000.

212. *Silver certificates.*—To Secretary Manning belongs the credit for having postponed for several years the worst effects of the bad financial legislation. Up to 1885 the greenbacks had been issued in denominations below $5. After that date the Secretary ordered that none should be issued under $5. In the next year he procured from Congress the authority to issue silver certificates in denominations of $1, $2 and $5.

This device solved the problem of keeping silver in circulation by proxy, but it did not cure the fundamental trouble, the serious consequences of which culminated eight years later.

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[1] White, "Money and Banking," p. 172.

The secretary was helped out of his dilemma by a favorable condition at this time. Sharp advances in price of Government bonds had reduced the profit in the issue of national bank notes and a considerable contraction in their volume occurred. The vacancy in the circulation left by the retirement of a number of the national bank notes was filled by the silver certificates and they were restrained from returning to the treasury for redemption or in payment of Government dues.

> When the silver coinage act was passed in 1878, its opponents predicted that sooner or later it would cause a financial panic. They said that, since the metallic value of the silver dollars was not equal to the face value, they were simply a new kind of fiat money, and that, whenever they should become redundant, they would act like any other fiat money—like the greenbacks at the beginning of the war, for example. There would then be a change in the standard of value, if the coinage were continued. This was a true prophecy, but the fulfillment was delayed by the shrinkage in the national bank circulation and by the retirement of small greenbacks, which created a vacuum for the new silver to fill. But this was a silent operation. The public could not understand it, and so, as the years rolled on and no harm came from the coining of silver dollars, the predictions of panic fell under popular ridicule.[1]

213. *Currency situation in* 1890.—In 1890 there were outstanding in circulation three varieties of money depending for their value upon the credit backing of the Government. The silver dollars, the treasury notes and the greenbacks all rested upon the Government's pledge to redeem them upon demand in gold. At this

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[1] White, "Money and Banking," p. 175.

time the law required no particular gold reserve, but custom had established the amount of $100,000,000. Even if the gold were maintained at a minimum figure the constant increase in the volume of credit money due to the silver purchases lessened the reserve percentage. This might not have led to serious consequences of itself, but after 1890 other natural and inevitable effects of the redundant issue of credit money began to be perceived. Gold exports began and continued until the gold reserve had been so depleted as to cause grave alarm for the maintenance of government credit.

The great danger of a sudden demand for one kind of money over another comes from the cumulative effect. When there was danger of gold becoming scarce, everybody began to desire it before other forms of money, and thus accelerated the withdrawal of gold from the treasury after the banks had begun to refuse to make payments in that metal.

214. *The treasury gold reserve.*—As doubt increased as to whether the Government would be able to redeem the credit money on demand in gold, the banks began to convert their reserves into gold as rapidly as possible.

Gold exports were resumed in 1892. In November of that year the gold in the Treasury had fallen from $185,000,000 (in August, 1890) to $124,000,000 and was still declining. Secretary Foster was much depressed. When he came to New York to speak at a dinner of the Chamber of Commerce, he said, among other things, that the Government intended to maintain gold payments, even if it became necessary to sell government bonds for the purpose. This was an admission on his part that gold payments could not be continued without resorting to extraordinary means. Probably Mr. Foster made this speech in order to test public sentiment and to find out whether he would be sustained in issuing government bonds in time of peace. There had been no increase of the bonded debt since the close of the Civil War, and some persons in high place denied that there was any legal authority to issue new bonds. Apparently Mr. Foster was satisfied by the applause with which his announced purposes was received by his hearers and by the press, for shortly afterwards he issued an order to the Bureau of Engraving and Printing to prepare new bonds. This order was dated February 20, 1893, and Mr. Foster was to go out of office on the 4th of March. Naturally, he preferred to put upon his successor the onus of issuing the bonds if he could. So he came to New York and persuaded the banks to give him a few millions of gold in exchange for legal tender notes, enough to carry him along till the 4th of March. This enabled him to glide out of office leaving the $100,000,000 redemption fund intact, but with only $982,410 gold in excess of that sum and with the penumbra of a deficit in full view.[1]

215. *Repeal of the Sherman Act.*—Upon Secretary Carlisle fell the burden which the Republican administration had managed to avoid. President Cleveland announced that the redemption of Government credit money in gold would be continued under all circumstances. And early in the summer he called a special session of Congress which repealed the silver purchasing clause of the Sherman Act of 1890. Just at this time the mints of India were closed to the free coinage of silver, which caused the price of that metal to fall from $.82 to $.67 per ounce within three days. These events inaugurated the panic of 1893.

The repeal of the Sherman Act came too late to save the situation. The gold reserve continued to decline until it had reached $67,000,000 in January of the following year. The difficulty was aggravated by the sharp decline in government revenues which the shrinkage of imports and consequently the duties collected thereon brought about.

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[1] White, "Money and Banking," p. 176.

Congress at this time was Republican. President Cleveland used his utmost endeavor to get legislation authorizing him to replenish and maintain the gold reserve by means of bonds issued. The partisanship of the Republican party in this crisis was greater than its patriotism. It seemed to be willing to permit the country to suffer and its credit to be ruined if only the prestige of the Democratic party could be injured, notwithstanding the fact that the cause of the crisis could be traced to legislation passed by the Republicans themselves. That party relied upon the ignorance of the public and upon their power to inculcate the belief that the Democratic party was responsible for the panic. The opprobrium which the President was compelled to endure in the next two or three years proved that the Republicans had been successful in their calculations.

216. *Authority to issue bonds.*—Failing to get the consent of Congress to the issue of bonds the President was obliged to fall back upon the Resumption Act of 1875 which provided power to sell bonds for the purpose of redeeming the greenbacks. The purpose of this law was to give the Secretary the means by which the greenbacks could be redeemed and there was grave doubt as to the propriety of using it for the present purpose. President Cleveland was strong enough, however, to put the needs of the country above legal technicalities and a bond issue was authorized.

217. *Successive issues of bonds.*—By means of this bond issue the gold reserve was brought up above the $100,000,000 limit, but the same causes which had be-

fore depleted it were still operative and it was again reduced by withdrawals to $52,000,000 within six months.

Another bond issue of $50,000,000 in November, 1894, failed to help the situation. Faith in the ability of the United States to maintain its credit grew weaker and weaker.

The withdrawals of gold for export, however, had a limit, but at this time evidence appeared showing that much gold was being hoarded. This was an ominous sign, for if this hoarding went on with cumulative effect there was no limit to the demands which might be made upon the treasury.

218. *The Belmont-Morgan Syndicate.*—At this crisis President Cleveland took an action which for the time being, made him more unpopular than any President who had preceded him. Perceiving clearly that bonds sold in this country simply created an endless chain, the final result of which was to increase the bonded indebtedness of the Government without permanently relieving the situation, he appealed to the syndicate of New York bankers. The arrangement made with Belmont-Morgan was that they should provide the treasury with gold to the amount of $65,117,500, half of which at least should be brought from Europe and that the syndicate should do all in its power to protect the gold reserve in the treasury.

It may seem strange that the syndicate of bankers had more power to produce a certain result than the Government of the United States in time of peace. The Government at this time, however, was in a condition similar to that of a strong man who has indulged in a debauch which has paralyzed all his powers. The

Government had abused its credit by the issue of promises to pay gold until it was in immediate danger of collapse.

The gold which the syndicate agreed to furnish to the treasury was paid for with 4 per cent thirty-year bonds at 104.49, the rate of yield of which would figure 3¾ per cent per annum. The syndicate made a proposition to the Government that if the bonds were made payable in gold they would accept them at a price equivalent to 3 per cent instead of 3¾ per cent yield. The saving to the Government on this proposition would have amounted to over $16,000,000 during the life of the bonds, but the narrow mindedness of Congress and their petty satisfaction in embarrassing the President caused them to reject the proposition. The syndicate stopped the exports of gold by offering to sell exchange at a price which would make it unprofitable to ship gold out of the country. By keeping the maximum price of sterling exchange below the export point they protected the gold in this country and importations of gold from their European correspondents soon brought up the reserve above the one hundred million dollar mark.

There were not wanting people at this time to charge that the financiers had brought about the crisis and the shortage of gold for the sake of their own profit. It was forgotten that the losses which members of the syndicate as well as all the financial interests of the country suffered by the panic of 1893 were hundreds of times greater than the profit they derived from this transaction. It was forgotten that when the syndicate made this agreement they were taking the greatest risk in being able to carry it out. And if there had not been an improvement in conditions, their losses in attempting to keep sterling exchange below the export point, might have exceeded greatly the profits.

The episode which began with the silver purchased and ended with the syndicate agreement ought to teach a lesson for all time that the Government is not all-powerful and that its credit may be endangered the same as that of a private individual or corporation. To show how little the lesson had really been appreciated it is sufficient to recall that one of the strong arguments of the free silver party within a year or two was that the Government is big enough to absorb all the silver in the world without feeling it.

219. *Silver question.*—It must be remembered that during the trying times of President Cleveland's second administration the Republican party sympathized with the Silver party and were under obligations to them for assistance in passing the McKinley tariff bill, which at that time was more important to the interests represented by the Republican party than the money question. The panic of 1893 and the depression following, so far from teaching the public a wholesome lesson in the elements of finance, gave the inflationists an opportunity to press their demand for more currency.

The average man in 1894 could not be brought to believe that the business depression was caused by a redundancy rather than a scarcity of money. From his point of view money was very scarce and hard to get. He could not see that it was a contraction of credit and the lack of confidence in future values that had laid a heavy hand on all business enterprises. He readily fell in with the doctrine that more money made higher prices and that higher prices would bring prosperity.

If a proposition had been made to change the bushel from thirty-two quarts to thirty quarts in order to increase the supply of potatoes in the country its absurdity would have been readily perceived. The same proposition with reference to the dollar was readily accepted.

There can be no doubt that the decline of prices had been caused by the decrease in the production of gold relatively to the increased volume of business in the world after 1870 and also to the increased demand placed upon the gold in existence by the demonetization of silver. The devotees of international bimetalism were quite right in believing that concerted action by the governments of the world in restoring silver to its status as standard money would lighten the demand upon gold and cause a general rise of prices. The futility of expecting any such action, however, was apparent after the failure of the International Monetary Congress of 1878.

220. *Origin of the Free Silver movement.*—The purchasers of silver bullion who had a selfish interest in attempting to raise the price of silver found a powerful alliance with the western farmers. This class of men had gone into the country west of the Mississippi and had taken up as much land as they could under the easy terms of the Homestead act. As a rule these men were lacking in capital to begin farming operations. They were compelled to borrow funds at exorbitant rates of interest by mortgaging their real estate. Under the high prices of wheat, which at that time was the one crop which the farmer was sure of being able to turn into cash, he figured that he would easily meet the interest on the mortgage and lay aside each year enough to pay off the mortgage at maturity. As wheat

declined in price from $2 per bushel to $.50 while the amounts payable on the mortgage remained the same as before, the burden of meeting these payments became greater and greater until foreclosure and bankruptcy seemed inevitable. Under such depressing conditions the farmers were ready to accept the most plausible explanation presented by the silver interests. The only possible remedy seemed to be a rise of prices, especially in wheat.

221. *Arguments for free silver.*—There does not seem to be any way to deny that an increase in the quantity of standard money would raise prices, but the proposition to swell the volume of standard money by diluting it with silver under the world-wide conditions prevailing at that time would probably have brought conditions to the country as a whole which were much worse than they were enduring, although probably the mortgage-burdened farmer as a rule would have been helped temporarily.

The farmer was also invited to consider how difficult the payment of the national debt was becoming. At the end of the Civil War it amounted to $2,800,000,000 and might then have been paid with 1,400,000,000 bushels of wheat, which was worth at that time $2.00 a bushel. This national debt was mainly in the form of bonds which the Government had sold for greenbacks worth only fifty cents on the dollar in gold. Owing to the conspiracy among the "gold bugs" of the east, Congress had enforced the payment of these bonds in gold, so that the Government was paying back to its creditors twice as much as it had received.

But this was not all, for that same conspiracy had increased the value of gold itself. The real wealth of the country lies in such commodities as wheat. The gold payments already made on account of the national debt had been sufficient to buy, at the prices prevailing when the payments were made, 4,000,000,000 bushels of wheat, an amount nearly three times as great as the original debt when figured in wheat. Nevertheless the debt had not been paid, for there remained still due $1,500,000,000, which represented at the then low price of wheat, 3,000,000,000 bushels, or over twice as much as was owed in the beginning.

It is not strange that this reasoning, which made the debt in goods grow in spite of the fact that it had been twice paid, should have a powerful influence upon the agricultural population. Wheat was not the only agricultural product that had fallen in price. The price of almost everything that the farmer could raise for the market had been cut in two. The advocates of silver held that its free coinage would cause a tendency of prices upward, and that this would atone for the injustice worked by the fall of prices after 1873. It was only fair, they argued, that the debtor who had been robbed should now get back some of his due.[1]

222. *Argument to the workingman.*—While the low price of wheat and other food stuffs had placed the farmer in such a predicament it might seem that there was a corresponding benefit to all consumers, especially the laboring class, the largest percentage of whose income must be spent for food. The advantage to this class, however, had been negatived by the crisis of 1893 which threw so many out of employment. They could not be brought to consider that cheap food was a great advantage when their incomes were so precarious. Even the statisticians proved that the relative rate of wages in proportion to the cost of living had increased greatly since 1873 it was not sufficient to offset the lack of employment during the business depression. To this class it appeared also that the difficulty lay in the scarcity of money; free silver meant more money in

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[1] Johnson, "Money and Currency," pp. 244–5.

circulation and that was obviously the remedy for the distress.

223. *Arguments of advocates of gold.*—While many of the arguments of the free silver leaders were unscientific and calculated to appeal to popular prejudices and ignorance, many of the arguments of their opponents were no better. The advocates of gold made some strange deductions from the argument that with the free coinage of silver the country would be placed upon a silver standard along with Mexico and China. They tried to frighten the workingman by stating that his wages would be paid in "50-cent dollars." They prophesied a deluge of silver from all quarters of the world without perceiving that the latter event would be absolutely inconsistent with 50-cent dollars. There would be no inducement for the importation of silver from abroad unless its value was raised in this country. If Congress passed a law authorizing the coinage of 50 cents worth of silver into legal tender which would perform the same money work as $1 worth of gold, it is not difficult to see that there would at once arise a great demand for silver. Nobody would pay out gold in the payment of debts or for commodities so long as it could be exchanged anywhere in the world for a quantity of silver that would do more money work. Gold would absolutely retire from circulation in this country until the demand for silver would have brought the value of the latter metal to a par with gold at a ratio of 16 to 1.

224. *The 50-cent dollar.*—The persons who threatened the country with the bogey of the 50-cent dollar forgot the influence which an enormous demand would have on the value of silver. As rapidly as the gold was withdrawn from other countries, in those countries

prices would rise. The only nations which had large quanties of silver were India, Mexico and China. The silver in the gold-standard countries was to a large extent needed there for subsidiary coinage.

The effect of withdrawing any considerable quantity of silver from silver-standard countries would be to reduce the money supply there, causing an appreciation in the value of silver as compared with commodities and putting those countries in a far worse position in consequence of the appreciating standard, than the United States had been.

The silver prices of commodities in those countries would have fallen so low that large exports would have been inevitable. After the confusion incident to the alteration of the standards had passed and the new equilibrium established, it is doubtful whether the United States would have received any large proportion of the world's supply of silver. The United States would certainly have found itself on the single silver-standard basis until the price of silver had reached par with gold 16 to 1, and perhaps for a considerable time thereafter. People would have learned to appreciate gold to such an extent that it is not likely the habit formed during this interval could be easily broken.

225. *Probable results of free silver.*—It is quite likely that the victory of the free silver party would have resulted in a very sharp rise of prices; then as the value of silver rose toward a parity with gold, a decline from the new high level would probably have begun, so that the gradually appreciating level of prices which had been hoped for by the silver leaders would not have occurred. There would probably have been a gradual rise of prices in all gold-standard countries corresponding to the gradual decline in silver-using

countries. The greatest beneficiaries of free silver would therefore have been those countries which had been charged with causing the whole trouble.

So when two countries are using different metals as money a fall in the value of one causes the country using it to increase its exports by an amount sufficient to pay for the additional quantity of metal needed in its money supply. If the value of one rises, the exports of the country using the other metal as money will apparently be stimulated but will not in the long run be increased in quantity. The free coinage of silver could have given the United States no advantage in the markets of the world unless silver had continued to depreciate, in which case the United States would simply have increased its exports by an amount sufficient to pay for the additional silver which it needed as money. It is doubtful if such an increase of exports could be called advantageous, for we should have been giving to the world larger and larger quantities of wheat, cotton, etc., in exchange for a cheapening metal. There was no certainty, however, that even this doubtful advantage would have been gained, for silver, if we coined it freely, would have been quite as likely to rise in value as to fall.[1]

If free coinage of silver had become a fact the debtor class would have gained enormously at the expense of the creditors; the western farmer would have been able to pay off his mortgages easily. So far the silver leaders were probably correct in their predictions. To offset this advantage, however, the country would probably have experienced a period of monetary chaos extending over a period of some years. During this time there would have been a great reluctance on the part of business men to enter into contracts involving the future payment of money. The banking business, foreign exchange and the whole mechanism of credit would have been thrown out of adjustment, so that in spite of the stimulating effect of the higher prices it is likely that general business would have diminished in volume below the low level reached in 1896.

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[1] Johnson, "Money and Currency," p. 259.

The sudden rise of prices would have stimulated speculation to a most unwarranted degree and the credit which would have been created in these transactions would have been of the most ephemeral and dangerous character.

226. *The real debtor class.*—The advantage which free silver would have brought to the debtor class in general must not be exaggerated. Popular sympathy is always with the debtor, who is pictured as a poor man at the mercy of a wealthy one. The holder of the mortgage against the struggling western farmer was always conceived to be a corpulent and greedy capitalist. An accurate conception of the debtor and creditor classes would practically reverse this popular idea. The greatest debtors in the country are the banks, who owe millions of dollars to their depositors; also the great corporations which have enormous bond issues on which they must pay interest. While the farmer was struggling with his little mortgage, the great railroad and other corporations of the country were having exactly a similar experience with their mortgages. As a general rule the great financiers are more likely to be debtors than creditors, for their very wealth comes from the profitable use of funds borrowed of other people.

On the other hand the creditors of the country are the great mass of people who have deposits in banks or shares in building and loan associations or policies in life insurance companies. They are the great universities and other endowed institutions of the country. In short they are the people who possess properties which they are not able to use in business themselves and intrust to others to use for them.

227. *Solution of the silver question.*—The end of the free-silver agitation did not come because of the admission that either side had been in error, nor did it come because the defeated party accepted the result without protest. Like the tariff the silver question would probably have been a perennial one if it had not been that the whole problem was eliminated by nature herself. Even when the agitation was at its height the natural remedy for the scarcity of the standard metal had begun to work. The tendency to lower prices for commodities had extended to the materials and labor used in gold mining with the result that the margin of profit between the cost and the proceeds had widened until the industry became very attractive. Moreover the processes for obtaining the gold from low-grade ores at a fraction of the former cost, described in the chapter on the production of gold, were beginning to have their inevitable effect and within half a dozen years the change was so abrupt that instead of apprehension because of the threatened scarcity of gold, the authorities began to be alarmed lest the excessive production of gold might lead to disastrous economic consequences.

At the same time, however, the production of silver was increasing at an equal pace, due largely to the fact that it is an important by-product of copper production, which had experienced an extraordinary boom following the development of electrical machinery. For this reason the increased production of gold did not solve the monetary problem for countries on a silver-standard basis. Without adopting the gold standard, several of these countries have been able to eliminate the difficulties inherent in a standard different from that of the principal trading countries of the world. This happy result was reached without political agitation by a commission of expert economists from all the important countries of Europe, and including Jeremiah W. Jenks, Charles A. Conant and H. H. Hanna, Americans well known for their connection with the monetary discussions. The system which they worked out is called the "gold exchange standard" and has been applied to several countries on the silver basis.

228. *Gold exchange standard in Mexico.*—Mexico adopted the system in 1905 and the standard unit of money in that country is the Mexican dollar or peso, which contains silver to the amount of about 50 cents in gold. Without interfering with its function as a standard of value the right of free coinage was withdrawn from silver. By regulating the amount of silver coined and by the sale of foreign exchange at a fixed rate so as to prevent the export of gold or the appearance of a premium on gold for export the Government is able to maintain a fixed ratio between the silver peso and gold. The country is protected against a sudden decline in the price of silver because of the control exercised by the Government over the coinage of silver pesos. A fall in the bullion value of the peso does not lower the value of the coin as money because the demand for them for monetary uses maintains their value irrespective of the worth of the bullion.

The Mexican dollar is a very popular medium of exchange in the silver-using countries, and an extraordinary number of them has been distributed throughout the world. In order to prevent their return to Mexico in large quantities in the event of a fall in their bullion value, which might cause them to be rejected in trade, the Government has placed a customs duty upon them, which can be so adjusted as to prevent their influx into the country sufficiently to depress the value of the peso below the present level.

In the event of a rise of the price of silver above 64 cents per ounce, at which price the peso is equivalent to 50 cents in United States money, the coins will be worth more as bullion than they are money and will be exported from the country to be sold in the silver market. The resultant contraction of the currency will raise the value of the peso as a coin to a par with its value as bullion. To provide for this contingency there is a condition in the system for the free coinage of gold pesos which would supply Mexico with gold coins in the place of the disappearing silver pesos. The subsidiary coins would still remain in circulation, however, being underweight as compared with the standard coin. A rise of the price of silver, therefore, would place Mexico at once upon a gold standard basis.

Under the present plan with the price of silver below 50 cents per peso Mexico has a basis of silver credit money redeemable in gold, because the Government guarantees to sell foreign exchange calling for gold in England and other countries in exchange for the money of the country. This amounts intrinsically to redemption in gold.

PART II: BANKING

CHAPTER XII

NATURE OF CREDIT

229. *Origin and kinds of credits.*—A credit is a deferred or postponed payment of money. It always represents a promise, express or implied, to pay a certain number of dollars at some time, definite or indefinite. Inasmuch as it is a promise to pay money, certain forms of it circulate in lieu of money, the ease and extent of this circulation depending directly upon the integrity and ability to pay of the maker of the credit, and the date and conditions of payment.

Credits come into existence always as the result of an exchange, either the exchange of credit for goods, credit for money, or credit for credit. If A purchases goods from B, he may tender in payment either gold, his personal check, bank notes, United States notes or his own promise to pay in sixty days. If the payment is made in gold, no credit operation is involved. If made by check or in bank notes, it represents merely a transfer of credit already created by the bank. If made in United States notes it is likewise a transfer of credit, this time of Government credit. If payment is made by his own promissory note, however, a new credit, payable at a definite time, is created.

Credit is of two kinds—non-circulating and circulating. Non-circulating credit accomplishes one exchange while circulating credit accomplishes many. In the case above if A pays with a promissory note, an exchange has been made by means of the credit thus created. At the end of sixty days, however, the credit must be liquidated, by means of cash, if it has not been cancelled by an exchange of property in the opposite direction. The credit which served as a medium of exchange in the first transaction must itself be exchanged for cash at maturity, and the whole transaction amounts in the end to an exchange of goods for cash extending over a period of sixty days.

230. *Use of credit in industry.*—Under our capitalistic system of industry every enterprise requires capital. The *entrepreneur* must have buildings, land, machinery—a great variety of capital goods which make up the plant and equipment of the business—and he must have the services of employès and raw materials. He must prepare for the various expenses of the business—wages, taxes, etc. If he is not a capitalist himself and cannot induce capitalists to share with him the risks and profits of his business, he must borrow this property from others. All these obligations are credits and must sometime be liquidated by the payment of cash.

The form which these credits will take will be determined largely by the nature of the business, the sagacity of the *entrepreneur* himself and the condition of the credit market. We have seen that credits vary in respect to time and conditions of payment. Most *entrepreneurs* are capitalists to a certain extent, their demand for credit arising from the fact that they expect to enlarge their business by supplementing their capital. Let us suppose that a manufacturer owns outright his lands, factory and machinery, and in addition has a working capital sufficient to meet his payrolls and expenses for some time to come. He has also a stock of finished product on hand, the market for which is seasonal and which amounts to only one-half the product which he expects to market, or perhaps has contracted to deliver when the season comes. Obviously he must have more raw material, and if he cannot purchase it on credit, he will go to his banker, make a complete statement of his condition, and if it is satisfactory, give to the bank his promissory note maturing at a date when he will have marketed his product. In return for this he will receive a credit on the bank's books, which will enable him to purchase the desired material.

231. *Function of commercial banking.*—This is the great function of commercial banking, to enable manufacturers and merchants to enlarge their business by extending to them for short periods the use of credit by which they can carry goods from the time of purchase to that of sale. The readiness with which credit will be granted depends upon the reputation of the manufacturer or merchant for selling his product, the amount of credit asked for and upon the nature of the business. In dull times not every commodity will sell, yet upon the proceeds of the sale depends the redemption of the credit. Therefore those who deal in articles which are always reasonably sure to sell, such as food products, clothing and in general the necessities of life, are the most certain to obtain credit and in the largest amounts relative to their capital investment. Reputation for selling, however, is a great factor, and credit is often extended on this account even to those whose product is, generally speaking, not apt to be quickly convertible.

It may be, however, that the *entrepreneur* after reaching the limit of his own resources, will prefer to add permanently to his working capital instead of increasing and decreasing it as his business demands. It may be that the nature of his business is such that he finds it difficult to obtain credit in dull times. Even in prosperous times he may feel that a general contraction of credits is due, and that he may be unable to market his product to meet his obligations. If such is the case, he may add to his working capital by borrowing for a long period, placing a mortgage upon his real property.

232. *Mortgages and bonds.*—A mortgage is a secured credit, that is, secured by the pledge of specific property. The most common form in which this kind of credit is used, is that of bonds. A bond is a portion or fraction of a mortgage. When mortgages are so large in amount that in their entirety they cannot find a market with any one individual or institution, they are divided into parts, called bonds, for distribution. This credit must be redeemed, of course, at its maturity just like the short-time credit, but the maturity is usually far enough distant to give the *entrepreneur* an opportunity of meeting it out of his accumulated profits. Moreover if the property which secures it has not depreciated in the meantime, it can often be renewed at maturity.

This form of credit is ordinarily used when the proceeds of the loan are to be used for some fixed or permanent investment. Thus it is the form commonly used by railroads, public service corporations, large industrial corporations owning valuable real property, and the like. The interest on the bonds is paid out of the savings of the corporation, and when they mature the principal is paid by the sale of new securities.

233. *Example of timber industry.*—There are certain industries, however, in which both these methods of obtaining credit are used. A good example is the lum-

ber industry. We have seen that the merchant and manufacturer of quickly convertible products will ordinarily borrow commercially and that railroads and similar corporations will borrow on long-time obligations because the money so obtained is to be used in permanent investment, and the obligations cannot be redeemed except by refunding. The lumberman is of course a manufacturer but his product is not always quickly convertible. When a panic comes, people must still have food and clothing but they can get along without building new houses. Therefore lumber is one of the first commodities to feel the depression through a falling off in demand.

A complete lumbering industry will own a saw mill, a supply of timber sufficient to last for a number of years, and a quantity of manufactured lumber piled in the yards awaiting sale. In this country lumbermen have always been large borrowers. The price of lumber, and the value of timber land have advanced steadily with the decrease of the available supply. Lumbermen have been quick to take advantage of this condition, and have always been eager to borrow to add to their timber holdings. When the northern lumbermen began to go south in the eighties they found that timber land was cheap and that it could be bought on credit, hence they invested their capital in equities. That is, they made a first payment in cash, agreeing to pay an additional amount every year or as the timber was cut. Obviously they must manufacture and market lumber in order to meet their obligations. As soon as the product was ready for sale it was a "bankable asset" because in boom times lumber finds a ready market. Consequently lumbermen became large commercial borrowers, the amount of their short-time credit outstanding often exceeding the value of the manufactured stock on hand.

234. *Advantages of timber bonds.*—Since the year 1900, however, many dealers in lumber have taken advantage of the increase in value of their timber lands to retire their outstanding notes and the obligations they incurred in the original purchase of this land, by issuing bonds secured by all their real property. These bonds are usually serial, a certain amount of them maturing every year as the timber is cut. The advantage of this method of borrowing is obvious. Only a fraction of their indebtedness must be met each year, and they know beforehand just what that amount will be and can prepare for it. When they borrow on short-time notes and a panic occurs, they may find it very difficult either to sell their product or to renew their notes. Almost their entire indebtedness is likely to become due within six months, and if conditions do not improve, there is grave danger of bankruptcy. It is probable that this condition was largely responsible for the big slump in the price of Southern pine following the panic of 1907. There was such a great amount of short time lumber credits outstanding, that the competition between sellers became acute and prices declined very sharply. The lumbermen whose obligations were in the form of bonds, however, did not enter this competition, so did not sacrifice either their manufactured product or their timber.

235. *Interest rates on bonds.*—The form which this borrowing will take, however, is further influenced by the condition of the credit market, as evidenced by the prevailing rate of interest. The rate of interest paid upon the various kinds of long-time obligations is fairly well fixed, although it varies somewhat with the demand or supply of such investments. Thus railroad bonds

bear from $3\frac{1}{2}$ per cent to $4\frac{1}{2}$ per cent interest; public service corporation bonds from $4\frac{1}{2}$ per cent to $5\frac{1}{2}$ per cent and industrial and real estate mortgage bonds from 5 per cent to 6 per cent. These rates are fixed by the regard in which the bonds are held by investors in respect to security of principal and convertibility into cash. The rate at which the commercial borrower must discount his note, however, varies within much greater limits. It may be as low as 3 per cent when the demand for credit is small and the banks are eager to loan. This condition is known as "easy money." When business improves and demand for credit increases, the rate advances until in time of panic it may be as high as 10 or 12 per cent. The average is from 4 to 5 per cent.

236. *Long-time borrowing.*—Naturally the *entrepreneur* wishes to borrow money at the lowest possible rate. During periods of easy money he is loath to retire his short-time indebtedness on which he may be paying 4 per cent by the issue of bonds which will cost him 6 per cent. As money becomes tight, however, he becomes anxious to make this change, but often the time has passed when the market will absorb his bonds. Thus, in an endeavor to obtain the lowest rate at all times, there is danger of his finding himself in a tight money market with all his obligations in short-time form. The advantage of long-time borrowing in certain lines of industry is so obvious, however, that sagacious business men will often sell high-rate bonds when the commercial rate is much lower, knowing that in the long run their interest account will average lower, and that in case of panic their situation will be much more secure.

237. *Credit economizes the use of gold.*—Credit is like fire—a good servant, but a bad master. So long

as it is controlled and prevented from sudden contraction it serves to economize the use of gold, doing the work of exchanging goods more conveniently than gold itself. We have seen that prices depend upon the amount of the media of exchange. The use of credit, therefore, permits business to expand and trading to be accelerated without a reduction of prices, but on the other hand its use destroys the check which otherwise would prevent prices from rising to an artificial height thus bringing on a panic. A discussion of the effect of credit on prices, however, belongs to a later chapter.

238. *Liquidation of credit.*—We have seen that all private credits must in the end be liquidated by means of cash. During a time of prosperity when prices are rising and fortunes are being made simply by buying at a low price and selling at a higher, many people purchase property on credit, usually giving the property as security for the credit. The profits of industry are increasing, hence business men are straining every nerve to increase their business. To do this they must obtain credit. Furthermore at such times bankers become accustomed to seeing goods sold and credits liquidated, and they loan more freely. Their portfolios are full of time credits, maturing in the future, acquired in exchange for demand credits due whenever called for.

At such a time suppose a political or financial disturbance shakes public confidence in the ability of debtors—especially banks—to meet their obligations; a demand for the pament of such credits as are due is sure to follow. Since the obligations of a bank are always due and payable, they are apt to suffer a "run." When this occurs they must themselves request payment of all credits that are due them and make practically no renewals. Other banks follow suit. This forces the merchant and manufacturer as their notes become due to sell their goods at a sacrifice, and before we know it we are in the midst of a financial panic.

239. *Commercial paper houses and the credit situation.*—The danger of this condition has been somewhat augmented by the custom of large borrowers discounting their notes through commercial paper houses. While this is more necessary on account of the process of consolidation which has gone on in industry in the last decade, it nevertheless injects into the situation a further element of danger. Formerly the merchant borrowed from his own bank direct, or if his business was large, from two or three banks in his own city. He knew the bankers personally, and kept an account at each bank. They were anxious to serve him, and would do so if possible, even in case of a panic. Hence his chances of renewing his maturing notes at such times were good.

With consolidation, however, and the growth of large industries came the necessity of increased credit. Many industries are now so large that the banks of one city cannot possibly finance their borrowing. Hence the necessity of a notebroker or commercial paper house, whose function is to distribute the notes of various concerns throughout the banks of the entire country. No doubt it is a necessary developement of the era of consolidation but it destroys the personal element of banking. The banker in Kansas has no personal interest in the success or failure of the New York merchant whose note he holds, beyond the payment of that particular note, and in times of panic he is quick to request valuable payment. The ability to borrow at a large number of banks is an asset during prosperous times; but if over-exercised, it can become almost in a moment a most importunate liability.

240. *Use of credit as a medium of exchange.*—The most important function of credit is its power to circulate as a medium of exchange. Obviously, if exchange can be consummated in large volume by means of credit, the necessity of huge national investment in the precious metal is obviated. The whole system rests upon the assumption that not everyone is going to present demand credits for redemption at the same time. Except in extreme instances, the assumption is a good one, and credit has become the chief medium of exchange of this country.

In order to circulate in lieu of money, credit must be payable on demand. Furthermore, the issuer must be one in whose integrity and ability to pay, the public has entire confidence. Naturally, then, the credit which circulates the most freely is Government credit. Second to this is bank credit, and as this is the medium in which a large proportion of our exchange is made, it is well to consider it separately.

241. *Bank credit.*—Bank credit has two forms, notes and deposits. The true bank note is the simple promise of the bank to pay legal tender on demand; the deposit is precisely the same except in form. These credits are created as the result of an exchange, either of money for credit, or credit for credit. If the customer brings money to the bank he receives for it either notes or a deposit account, depending upon which will best suit his needs. If he comes to the bank as a borrower, he exchanges his own time credit for the bank's demand credit and again takes it in either form he desires. It is the credits thus created which perform so

great a proportion of our money work. The notes themselves passing from hand to hand, and the checks drawn against the deposits consummate probably 90 per cent of our exchanges.

The issue of credits intended for circulation by private persons, corporations and banks has been attended by so much abuse in the past that governments have come to regard it as a quasi-public function which must be regulated strictly. Accordingly in this country the banks have lost the power to issue true bank notes, and can only issue notes secured by a deposit of government bonds with the United States Treasury. Our bank notes therefore are really Government bonds converted into currency. Each note is simply a fragment of a bond stripped of its interest and payable on demand.

242. *Deposit credit.*—The other form of circulating credit, or credit currency, consists of checks and drafts drawn against deposit credits. The currency is not the check or draft but the deposit credit itself; the document is simply a temporary form which the deposit takes for circulation. The drawing and paying of checks do not expand or contract the deposit currency but merely measure its rate of circulation.

This form of credit has been found to be much better suited to the needs of thickly settled communities than the bank note currency, whereas in new regions with poor banking facilities, notes are still the favorite medium. This is because of the fact that in new regions, transactions are smaller; whereas in the cities transactions are large and it would be most burdensome to carry about large amounts of bank notes with which to settle obligations. It is only in this country, however, that the deposit currency has reached its fullest development and it is noteworthy that even here it did not begin to do so until restrictions were placed by the Government upon the issue of bank notes.

Up to 1855 the note issues of the banks exceeded their deposits. In that year deposits forged ahead somewhat, but it was not until the national bank act of 1865 that they were given thier real impetus. Since that time the deposits have increased out of all proportion to the increase of the capital invested in banking, while the notes have materially fallen off in amount.

243. *Elasticity of deposit credit.*—The reason for this condition is to be found, of course, in the increase of population and the consequent growth of the banking habit; but even more important than these factors in its growth has been its innate ability to provide a medium of exchange which expands and contracts with the business needs of the country. There are certain times of the year when exchanges increase greatly in volume; this condition being particularly true of single communities where industries are not greatly varied.

Moreover, as business becomes brisk or slack, there are changes in the volume from year to year. This necessitates a constant change in the amount of the medium of exchange. Unless it is a period of general speculation and credits rest upon an unstable basis, this change in the demand for medium will be met automatically by an increase or decrease of checks and drafts drawn against the deposit currency. We shall see later on that this is the only currency in use in this country that had this attribute of elasticity. It is obvious that the issue of bank notes which must be first secured by deposit of Government bonds with the Treasury is exceedingly inelastic.

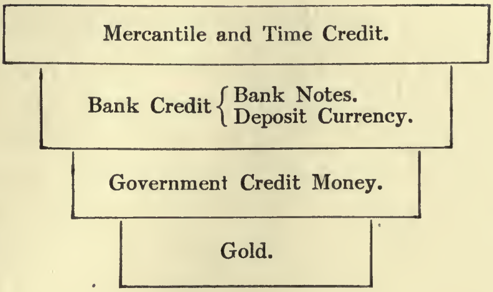
Having come into existence as the result of an exchange transaction, these circulating credits serve as a medium of exchange in a number of transactions before they are extinguished. They are usually liquidated by cancellation of one against the other rather than by payment of money; so that the exchanges which they have made have not merely postponed the actual transfer of money as in the case of the non-circulating credits. The fact that they serve the purpose of money and are usually settled by cancellation misleads people into supposing that they obviate the need for money. That such is not the case they learn sometimes to their sorrow when there comes a general demand for the redemption of credits according to their tenor.

The volume of credits contracts whenever there is liquidation or whenever they become depreciated in value. As long as the debtor continues to meet the matured obligation in money their value is maintained but whenever he refuses to do this value begins to decline concurrently with the chances of future payment. A credit depreciated to half its par value has lost half its power to do money work and is contracted half as much as if it had been liquidated.

Inasmuch as credit can serve the purposes of money even better than money itself, nobody would ever demand money unless he thought it was more valuable than the credit, that is, unless, in their opinion the value of the credit had depreciated. Such a depreciation could take place only when confidence in the ability of the debtor to pay was impaired. The only exceptions to this are cases where gold is required for use in the arts and for foreign payments. The run on the Government in 1893–4 for gold for the redemption of greenbacks was caused by the demand for gold to be exported in settlement of the international balance which had gone against us. This legitimate and regular demand for gold soon led to another demand which arose because people began to fear that the Government might not be able to meet its obligations.

To maintain the value of outstanding credits it is necessary for the issuer to sustain the confidence of the public in his ability to pay on demand. This can be done only by keeping within easy reach, money enough to satisfy all but the most extraordinary demands. It is not enough that he have property which is ordinarily convertible into means of payment, for when the demand for liquidation comes it is likely to fall on everyone at once and no one will care to part with money. Safely for the issuer of demand credits, therefore, lies only in keeping at all times a reserve of money sufficient to maintain confidence in his ability to pay. This reserve is the basis of outstanding credits.

244. *Gold the basis for all credit.*—The basis for bank credit is reserve money. All of this reserve money except gold coin is based more or less on the credit of the government. It is kept at par with gold because the government stands ready to redeem it dollar for dollar upon demand. In order to meet possible demands for redemption the government is required to keep a gold reserve of $150,000,000. The principle behind this law is the same as that behind the reserve section of the National Bank Act. The credit money of the government is based upon gold. The bank credit of the country is based upon government credit money, plus gold. The ordinary time and mercantile credit of the nation is based upon bank credit, government credit, money and gold. The following diagram illustrates the idea:


Mercantile and Time Credit.
Bank Credit { Bank Notes. Deposit Currency.
Government Credit Money.
Gold.

245. *Reserve.*—The essential feature of the bank is its power to keep outstanding a mass of non-interest bearing demand credits, either in the form of notes or deposits, which it has issued in exchange for interest bearing time credits. To keep these demand credits out, the bank must have the confidence of the public. This it acquires by its capital and reserve. The reserve represents to the depositor his protection, should he choose to request immediate redemption of his credit; the capital and surplus, represents his ultimate protection.

The national bank act requires that national banks in central reserve cities (New York, Chicago and St. Louis) shall keep a cash reserve of 25 percent of their outstanding demand credits. This reserve consists of gold, and Government credit. The general reserve cities, of which there are forty-nine, must keep 25 per cent reserve with the privilege of depositing half of it in central reserve cities. All other national banks must keep a 15 per cent reserve with the privilege of depositing 3-5 of it in reserve city banks.

246. *Effect of reserve requirements.*—The amount of reserve which should be kept by a bank depends upon the nature of its outstanding demand credits. If they are due to other banks they are more likely to be called for than if they are in the hands of large numbers of

people scattered over the country. The amount of reserve necessary cannot be determined by any fixed rule. The purpose of the reserve requirements of the national bank act is to put a check on undue expansion of demand credit by the banks, and forbids them making further loans as long as their reserve is below the legal requirements. In prosperous times this operates very well, but times of crisis and stringency are prolonged by it.

At such times each bank strives to hold as large a reserve as possible, refusing to make new loans or to renew old ones, and withdrawing its deposits from the city banks. The effect of this is to intensify the stringency. The proper policy would be to loan freely so that solvent firms may not be compelled to suspend because they cannot get ready funds with which to meet their current obligations. The Bank of England pursues this policy and permits its reserves to fall to a very low point, but it selects automatically the most urgent cases for relief by raising the rate of discount. In the recent panic, the Secretary of the Treasury and J. P. Morgan followed the correct banking principle when they put on the market large sums of money to be loaned.

247. *Danger of use of credit in panics.*—It is during panics that an elastic medium of exchange is most needed, and unfortunately the deposit currency, ordinarily elastic, not only refuses to stretch at such times, but contracts instead. Just as soon as there is a general demand for redemption of private credits even the banks are compelled to redeem their credits in legal tender, whether their ability to pay is thought to be impaired or not. To do this they must pay out their reserve money. This in turn cripples their ability to

loan and further depletes the deposit currency. Most of the so-called currency bills which have been introduced in Congress have attempted to remedy the evil by authorizing banks to issue note credits in payment of the deposit credits. In this way note credits could be used instead of reserve money for circulation, and unless the credit of the bank has suffered, reserve money will not be drawn out. Under our present law the issue of notes is impracticable at such times because it necessitates the purchase of United States bonds, which would further deplete the amount of the reserve.

In spite of these grave dangers which attend the use of credit as a medium of exchange, its use is a necessity of the era of modern industry; and as the public is gradually aroused to a study of the problems, its defects will disappear in the wake of competent legislation.

248. *Importance of credit.*—Credit is the life blood of the economic system, its amount and condition determining whether business be healthy and vigorous, or unhealthy and stagnant. It determines whether the population shall be busy and prosperous or unemployed and poverty stricken. Insomuch then as the science of banking and money is so intimately concerned with the very fundamentals of life,—the procurement of food, shelter and clothing, with health and with the whole standard of living, it assumes an importance equal to any other. If all the distress which followed the panic of 1907—the failure of business men, the reduction of incomes among all classes, the loss of employment and wages by thousands of workmen, bringing poverty into innumerable homes—if all this tremendous calamity was unnecessary and remediable, then the subject is one

of the greatest human interest, well worthy of the attention of trained investigators and master minds.

We have progressed far enough in our study to realize that the sole cause of some of our panics is the misuse of the credit medium and that it is a leading factor in all of them. Abnormal and sudden contractions and expansions of credit disturb the economic equilibrium by causing fluctuations of prices, manipulating profits, and destroying the spirit of enterprise among those who control the industrial activity of the nation.

CHAPTER XIII

EFFECT OF CREDIT ON PRICES

249. *Increasing need of more efficient money.*—We have already seen that the use of credit affects the general level of prices by increasing the efficiency of money. Were it not for credit the price level must always be fixed by the rates between the amount of goods to be exchanged and the amount of money in circulation, provided of course that the rate of circulation remain constant. As population increases, more goods are produced and more exchanging must be done, hence prices are certain to decline unless the value of money is increased or rendered more efficient. Declining prices lessen profits, the incentive to enterprise is deadened, the factors of production become idle and depression is chronic. A developing country, therefore, to be healthy economically must have a constantly increasing quantity of medium of exchange.

This need has been met by credit, chiefly in the form of bank credit. In the preceding chapters the several kinds of credit have been discussed and it may be well to consider briefly the effects of each.

250. *Effect of non-circulating credit.*—The use of non-circulating credit (promissory notes) has very little effect on prices through any economy of the use of money which it brings about *per se*. Such credits must be settled at maturity in money. Hence the use of money is postponed rather than obviated. It must be remembered, however, that the use of non-circulating

credit, while it facilitates production and thus increases the amount of transactions, at the same time greatly increases the medium by its creation of circulating credit. The manner in which non-circulating credits are converted by the banks into circulating credits had already been described. Business men issue promissory notes, discount them at the bank and receive in exchange bank credit either in the form of notes or deposit accounts.

It is this deposit currency which has in this country removed a greater part of the burden of exchanging goods from the shoulders of money itself. Probably 75 per cent of our exchanges are performed by the use of checks and drafts drawn against these deposits. Money must be held by the banks against their credits as a reserve to maintain confidence in their redemption, but the amount needed is only from 15 to 25 per cent of the outstanding credits. These checks and drafts, while they are merely promises to pay money and theoretically must be redeemed in money are so cancelled one against the other that little actual money is used.

251. *Cancellation of credit.*—For example, let us take an isolated community in which there are two banks, the deposits of each being $100,000, and the money reserves $25,000. A, B and C are local business men; A and B have deposit accounts with one bank and C with the other. If A gives his check to B in payment for goods, the check will be deposited by B and his account will be credited with the amount of the check, while's A's account will be charged. Thus goods have been exchanged solely by credit. If A gives his check to C, it will be deposited in C's bank, and theoretically C's bank may expect A's bank to pay the check in money. It is probable, however, that each bank will hold checks drawn on the other, in which event only

the difference in total amounts, or balance, will be settled in money. In this manner the checks are cancelled one against the other without any use of money. It is obvious that in large communities where it is customary to make settlements by check, that this cancellation becomes very important. How very important this custom has become will be seen when the functions of the clearing house are discussed.

252. *How lessened demand for money causes rise in prices.*—Thus money is used by the banks only as a reserve against actual withdrawals of money and for the settlement of balances. The efficiency of the dollar is by this system multiplied several times, hence the demand for money is lessened, and prices tend to rise.

The use of this form of credit has, moreover, a further, though not so important, influence upon prices. In poorly settled communities where banking facilities are meagre the merchant and the farmer must keep on hand in their cash drawers or pockets sufficient money to accomplish their purchases. It is inconvenient to make payments by check; in fact, if they did so, the check would probably be followed by the delivery of actual money. There is no way in which checks can be cancelled against each other. With the establishment of banks and the growth of the checking habit, however, the necessity for carrying about large amounts of actual money is overcome. The demand for money is thereby lessened, and prices again tend to rise.

253. *Effect of national bank notes.*—In the chapter on the nature of credit the difference between the true bank note and the national bank note was described. Inasmuch as the national bank notes are secured by Government bonds, which are merely long time Government credits, they circulate freely as money itself.

Their effect on prices, therefore, corresponds to the effect of other forms of Government credit, and will be discussed under that heading.

254. *Bank notes and checks differentiated.*—It has been already stated that the difference between the deposit and the true bank note is one of form. It remains, however, to describe the difference in form before the effect of true bank notes upon prices can be considered. The chief difference is that the bank note is payable to bearer, whereas checks and drafts—the forms in which the deposit currency circulates—are usually drawn in favor of a definite payee. Before the check is valuable it must be endorsed by the payee, whereas the note circulates without endorsement. Furthermore the value of a check depends upon the size of the deposit account possessed by the maker of the check. Thus checks do not circulate as freely as notes because both personal and bank credit are involved. They usually return to the bank promptly for redemption, whereas notes may remain outstanding for considerable periods.

Because notes are meant for wider circulation than checks, they have been generally endowed with certain preferences over deposits that enable them to meet more readily the demand for hand to hand money. These banks may be compelled to keep a larger and specific reserve for their redemption, or perhaps a guarantee fund with the Government; or as in this country the notes may be a first lien on all the assets of the bank and be secured by the pledge of Government bonds. That there is danger in endowing their security with too inflexible provisions, so that once issued they become a part of the actual money supply and are never presented for redemption, will be seen when our own bank note system is decribed in a subsequent chapter.

The true bank note, that is, one which is not secured, by the pledge of specific assets or a deposit of bonds but by the general credit of the bank, may have a very important effect on prices. For example let us suppose that the holder of deposit credits needs money for hand to hand transactions. Perhaps he is going away where he is not known and where his check would not be honored. If note issue were greatly restricted, the bank must honor his credit by the payment of actual reserve money. Under a system of free note issue on the other hand, no money would be needed; the bank would issue the note which would be generally acceptible and would remain outstanding only as long as there was demand for it as a medium of exchange. Once in the possession of another bank it would be presented for redemption because money is more valuable to bank than credit.

The use of the bank note tends to raise prices by lessening the demand for money. Its chief benefit, however, arises from the fact that it so often prevents prices from falling sharply when any extraordinary demand for hand to hand money (such as we are apt to have at certain times of the year and are sure to have in panics) causes a depletion of bank reserves and a contraction of credit.

255. *Effect of government credit money.*—The use of Government credit money and, in the country, of national bank notes, has practically the same effect on prices as a similar increase of actual money. When faith in the redemption is entire, and when it is made legal tender and is therefore available for bank reserves, an increase in Government credit money tends to raise prices just as would an increase in gold itself. A considerable issue of new Government credit in a single country will in fact increase prices all over the world.

Its first effect is a rise of prices in the issuing country. This means that imports will increase, and exports diminish. Finally gold must be exported in settlement of the international balance, and thus gold will tend to raise prices in the other countries.

256. *Credit and speculation.*—The use of credits, particularly bank credit has a further effect on prices in that it fosters speculation. Speculation is that sort of buying and selling which does not help to move goods along the channels of industry and commerce from the producer to the consumer. The object of speculation is gain from the adventitious fluctuation of price and not from the natural increment in value of goods arising from increased utility as they approach consumption. Legitimate speculation tends to equalize supply over long periods and adapt it to the demand, thus decreasing fluctuations of price and distributing its effects in the least harmful way.

Illegitimate speculation increases fluctuations of price, either through trading in ignorance of conditions of supply and demand or by manipulating the market and causing temporary changes which are not justified by supply and demand. It makes prices abnormal, usually abnormally high at first, followed by a period when they are abnormally low.

Bucket shopping and mere gambling on price fluctuations are not referred to here; though reprehensible in themselves and injurious to public morals, they are innocent of any effect on prices. It is only when property is actually bought and sold, when the demand and supply are altered, that changes in price result.

257. *How speculation may be both cause and effect of a rise in prices.*—To buy property, one must have means of payment. Speculation requires that the speculator

must not only have means of payment but that he must be able to hold property out of the market for a time. In speculation then, capital instead of being invested in productive enterprises and adding to the supply of goods, is locked up in goods hoping to profit not by productive increases but merely by a rise of price. Productive profits arise from an increase in the amount or utility of goods; speculative profits from artificial scarcity of goods. Speculation is both the cause and effect of price fluctuations; a natural increase of price will start, often, a speculative boom which soon makes prices abnormally high.

Credit is the instrument of speculation. It furnishes the medium of exchange which releases prices temporarily from their dependence on money, and permits them to soar. It enables persons with small capital to purchase and hold property. If credit were unknown and every exchange of property required money, speculation would still exist on a small scale; none but capitalists, however, could engage in it and the money which was diverted to the speculative buying of one commodity would be withdrawn from other uses, and the prices of others things must fall. A general speculative movement, therefore, would be impossible.

So far we have spoken of the effect of the various forms of credit only as compared to a system in which credit is not used. This was equivalent to considering merely the effect of an increase or expansion of credit. It remains therefore to examine the effect of prices of a contraction of credit.

258. *Defect of our currency system.*—Unfortunately this is the great defect of our credit system. Unlike expansion, which is gradual and always takes place in answer to a demand for money, contraction of credit

is likely to be very sudden. Moreover, it is likely to occur after a long period of expanding credit and rising prices; therefore the contraction and consequent fall of prices will be the more acute.

We have seen that credit depends on confidence that the debtor will be able and willing to meet his obligations. If anything occurs to destroy this confidence, there will be a general demand for payment. Moreover, it does not always take some great political upheaval to cause this disturbance, particularly if credits are greatly expanded and prices high. Any decided fall in prices in any great industry, due perhaps to conditions entirely peculiar to that industry, may cause a general slump of the stock market. This shrinkage in values causes doubt to be cast on the ability of debtors to pay, and such credits as are due are presented for payment. To meet these obligations, debtors must sell their goods and property. Since no one cares to purchase, prices decline sharply, to be followed by still greater distrust, lower values, further selling and so on, with cumulative effect. This process continues until a large portion of the credits have been liquidated.

This condition is not attributable to credit itself, but to our particular system. The great desideratum of a credit currency is elasticity—the power to expand when it is stretched and, what is more important, to contract of itself when the pull is removed. The amount of readily acceptable medium of exchange should, however, expand quickly and without restrictions when a general demand for liquidation appears. Hence if the banks could issue notes freely in times of panic, a vast amount of credits might be liquidated without resort to a depletion of bank reserves. The effect of liquidation on prices, therefore, would not be so cumulative.

It should not remain outstanding longer than there is an actual demand for it as a medium. When times are prosperous and profits increasing with rise in prices, stocks lend themselves readily to speculation and for that reason are apt to be abnormally high.

All the money in existence, however, cannot be said to be in circulation, and hence is not offered for goods at any one time. Besides the limitations on the number of exchanges which the average dollar can make within a given time, it frequently happens that dollars are hoarded for longer or shorter periods; until they are again put into circulation they might just as well be non-existent so far as their effect on prices is concerned. Moreover, the amount of the credit medium of exchange which is offered for goods constantly varies.

CHAPTER XIV

GOVERNMENT CREDIT CURRENCY

259. *Classification of government credit currency.*—A large amount of the money supply of the United States consists of Government credit. Under this head must be classed the greenbacks, the treasury notes, gold and silver certificates, silver dollars, and all subsidiary coins. These are all forms of credit money, because they derive their value as media of exchange from the Government's ability and readiness to redeem them in gold on demand.

It is obvious, however, that they do not all depend equally upon the Government's general credit. Silver dollars and the subsidiary coins possess a certain value in themselves because of the metal they contain. Gold and silver certificates are mere warehouse receipts for an equivalent amount of metal held in the treasury, and depend only upon the safe keeping of that metal. The greenbacks and treasury notes only are true credit money.

Credit money should not be confused with fiat money. We have already noted that the gold dollar derives its value both from the metal it contains and from the demand for it as a medium of exchange. Under our system of free coinage the supply is regulated automatically. In economic speech, the gold dollar is known as commodity money.

260. *Fiat money defined.*—Fiat money, on the other hand, is any money the supply of which is regulated

artificially and the demand for which is the result of its service as a medium of exchange. It may be composed of valuable metal, or it may not; in any event it is not its contents or convertibility, but its exchange utility that fixes its value.

Credit money is a promise to pay either fiat or commodity money. If it is a direct promise to pay, it is said to be redeemable, at least as long as the promise is kept; if the redemption is suspended or if it does not depend upon a direct promise to pay, but upon its customary redemption by the Government, it is said to be irredeemable. The difference between irredeemable credit and fiat money is that the good faith of the Government is pledged to the redemption of the former in spite of a period of suspension and its value will always be influenced by the prospect of its actual redemption.

261. *Factors determining the value of credit money.* —Since commodity money derives its value both from the value of the metal it contains and from the need for it as a medium of exchange, credit money based on gold, whether nominally redeemable or not, depends for its value first, upon the prospect of the redemption and second, upon the supply of credit money relative to the exchanging that is to be done.

In an earlier chapter we saw how the greenbacks fluctuated in value relatively to gold during the Civil War as their redemption seemed immediate or remote. This was not the sole reason, however, for their fluctuation. Within narrower limits the relative value of greenbacks to gold and of goods to greenbacks fell with each additional issue of notes. This can hardly be attributed to a belief that the new issue made redemption more uncertain; if the Government could redeem at all, it would make little difference whether there were

50 or 100,000,000 more notes. It can more reasonably be attributed merely to an increase of the money supply, which in itself was sufficient to raise prices. It is impossible to reach any definite conclusion as to how much of the fluctuation was caused by each of these influences, but it is clear that they were both at work.

In fact, when after 1868 the Government suspended entirely the retirement of the greenbacks, they continued to circulate and even rose rapidly in value. During the year that followed they were practically fiat money, drawing their value solely from the demand for them as a medium of exchange. In 1869, however, Congress passed what is known as the Public Credit Act, pledging their redemption in coin, so that they resumed their character of credit money.

262. *Risk in free use of credit money.*—The theory behind the issue of credit money is that it economizes the use of gold and prevents price fluctuations. Its most ardent advocates claim that it can become the sole medium of exchange in a nation where confidence in the government and its ability to redeem in gold is maintained. This confidence can be sustained by a reserve of gold upon which the country will draw only for the purpose of paying for imports. Furthermore its supply can be regulated and adapted to the varying needs of industry; at least such is the claim. That it is a dangerous device, however, the history of almost every nation shows.

263. *Regulation of credit money.*—That credit money economizes the use of gold is evident; hence so far as it can be issued without ill effects, it must be a benefit to a nation. The great danger is in its regulation. The effect of any issue of credit money on prices and on the money supply has already been mentioned.

Prices rise because there is more circulating medium; this increases imports which are always quick to take advantage of a rise in price; gold flows out of the country to pay for the imports. Prices then fall somewhat in the issuing country because of the loss of gold, and rise abroad; in the end, world prices are readjusted on a higher level.

This will take place whenever there is an issue of credit money, whether it is redeemable or irredeemable. As long as the issue is not excessive, that is, as long as the amount of credit money issued does not approach the amount of gold formerly in circulation, its effect is not dangerous. When the issue of either becomes excessive, so that all the gold flows out in payment for imports or is hoarded in expectation of such a condition, the credit money becomes the standard of prices and the sole medium of exchange.

At such times it makes little difference whether the credit money is nominally redeemable or not. Even if it is redeemable and the government keeps a gold reserve for the purpose, it will soon be depleted because all credit money issued in excess of the monetary demand will promptly be presented at the treasury for redemption. When this reserve has been paid out, credit money of either kind becomes irredeemable in fact. The only difference between the two forms seems to be that irredeemable credit will drive the gold out somewhat faster. When the government's promise to pay is express, and a reserve is kept, public confidence in the redemption will last longer, so that hoarding will not start as soon. In other words, a greater amount of redeemable than of irredeemable credit can be issued with safety.

The moment that credit money fails to circulate at par with gold, the credit money is said to be depreciated currency. This will take place long before all the gold has been driven out of circulation. The standard of prices will be a double one; goods will be priced so much for gold, and a greater amount for the credit money.

264. *Devices to maintain value of credit money.*—It has been the history of credit money that efforts are usually made to keep the credit circulating at par with gold by making it legal tender. This means that it must be accepted in payment of all debts. While this feature increases its efficiency as money, and theoretically makes it a more perfect substitute for gold, it is difficult to understand how it prevents its depreciation. We have seen that the value of credit money depends first upon the prospect of its redemption and second upon its supply relative to the money work which is to be done. The legal tender stamp does not increase the prospect of redemption of redeemable credit, because for that the government's faith is already definitely pledged.

It is only when credit money is irredeemable that making it legal tender to prevent depreciation is beneficial. In this case, the government is not already definitely pledged to redeem the credit, hence anything attached to it which is an evidence of the government's good faith increases public confidence in its redemption. The promise to accept it in payment of debts to itself is obviously an evidence of its purpose to redeem.

265. *Argument for government credit money.*—It must be admitted in support of those theorists who advocate the use of government credit as the "ideal money" that it has been tried usually under the most inauspicious circumstances, its issue generally having been resorted to only to finance wars or to maintain

prosperity which has already grown unhealthy. If it could be issued with the sole aim of steadying prices under conditions which would necessitate its redemption when the need for it disappeared, it might become a very effective instrument in the hands of a competent government.

Its issue on this theory is impracticable, however, because automatic redemption is impossible. When confidence in the government is general, all forms of credit issued by it find their way into the channels of trade, causing a rise of prices. As long as confidence is maintained, they will continue to be a part of the money supply because there is no motive for their redemption.

266. *Difficulties of adjusting supply.*—Moreover, it would be unsafe to give to Congress or to any association of bankers the power to expand and contract the money supply artificially. Congress is not always well informed of the business needs of the country; and bankers must always have personal and selfish interests. The effect of a sudden contraction of the money supply as seen in panics is well known. Moreover, the power to regulate the money supply would include the power to inflate or depress the price level. We are forced to the conclusion, therefore, that this credit has been well named "ideal money" by the theorists; "ideal" because it presupposes a state of technical knowledge on the part of legislative bodies and absence of self-interest which we may expect with the millennium.

Irredeemable credit money may circulate at par with gold if the issue is not excessive and if there is general confidence in the government. In this case the government has not promised to redeem the money, but it does so in practice, receiving it itself at par with gold. This is not fiat money because it derives its value not entirely from its exchange utility but from the government's actual redemption. The silver dollar is a good example.

Unfortunately, however, government credit money has seldom been issued in response to a demand for money as a medium of exchange. It has been issued largely in response to the fiscal needs of governments, that is, to meet extraordinary increases in current expenditures.

267. *Prejudices against government credit money before* 1861.—This has been especially true of the United States. The Constitution gave Congress the power "to borrow money on the credit of the United States"; also "to coin money and regulate the value thereof." In the Constitutional Convention a proposition to enable Congress "to emit bills of credit was defeated, it being the sense of the Convention that paper money was dangerous." The history of the Government shows that the dislike of paper money, no doubt a survival of the days of the Revolutionary bills of credit, must have continued until 1861. On only three occasions prior to this time had treasury notes been issued, namely, during the War of 1812, the panic of 1867 and the Mexican War of 1847. Moreover, the aggregate of these issues amounted to only $110,000,000, and in every case the notes were interest-bearing, and never attained general circulation.

268. *Financing the Civil War.*—The opening of the Civil War brought extraordinary conditions. Money must be raised at once for conducting the war, and in large sums. Should the Government "borrow money on the credit of the United States," or should it create money by issuing its notes and endowing them with the legal tender feature? The former it was empowered

to do by the Constitution and could have done by the sale of bonds. Government bonds are a form of government credit, but they are not credit money, as they are not payable on demand. The market for bonds was not good, however, and Congress chose the latter method as less expensive, though the constitutionality was very doubtful. It may be objected that "the power to borrow money" included the right to issue notes.

In regard to this point, the distinctions between capital and money must be kept in mind. From the business man's standpoint what the Government really needed was working capital. No business man would think of issuing demand obligations in exchange for capital goods, particularly when there was no prospect of an immediate increase of revenue with which to meet the obligations. The business man's obligations issued under such circumstances would be long-time credits in the form of bonds. Furthermore, there was no necessity for an increase in the money supply. Prices were sufficiently high. What the Government wanted was not money but purchasing power and this it could have borrowed without increasing the supply of money itself.

269. *Disadvantage of government debt.*—Government credit always represents a government debt. In this country we have become so accustomed to having a government debt that its elements of weakness are seldom analyzed. Our prosperity orators point with pride to the fact that the United States is the only nation in the world which can sell bonds that pay only 2 per cent interest. This is applauded as an evidence of prosperity, without analysis, with no thought that the very presence of a debt on the books of anyone, even of a nation, must always be a weakness. In what respect

should a government's financial activities differ from those of a well-regulated business? Do not the same principles underlie them both?

The business man will not borrow until he has already devised a time and method of payment. As we have already noted, the form in which he will borrow depends upon the disposition he wishes to make of the credit. If he expects to add to his fixed capital, he will borrow by issuing long-time credits, expecting either to pay them out of his profits or to renew them at maturity. If he merely wants the use of funds for a short time, he will issue short-time or demand credits. These he will expect to meet out of the proceeds of his sales.

270. *Government debt.*—When a government borrows it does so for current expenditures. These may be for permanent improvement, such as federal buildings, harbors, canals, which will benefit the public generally and the cost of which should be spread over the period of their usefulness rather than be met out of the revenue of a single year at the time of expenditure. A favorite expression is "to let posterity have its share of the burden." The government bonded debt in 1870 amounted to $2,331,169,956; in 1902 it had been reduced to $925,011,639.

The income of a government is generally spoken of as revenue and is derived entirely from various methods of taxation. If we wish to carry out the analogy between the government and the business man, we may say that the differences between the revenue and expenditures in any one year are profit, and that it is with this profit that the bonds are retired. The issue of bonds, therefore, when the proceeds are not squandered, rests on a firm business basis.

The issue of credit money, however, presents different problems. When the business man issues demand credits he purchases something salable with the proceeds, and expects to be in a position to retire the credit at any time. The government on the other hand merely spends the money, usually to meet some extraordinary expenses, and then has nothing to show for it. If it is a war that has been financed, as in the case of our greenbacks, it had a perfect right to borrow for the purpose just as it would have to make permanent improvements because, on the same theory, posterity should help bear an expense from which it will benefit. If it does that, however, a provision for redemption on demand must be made by the establishment of a sufficient gold reserve; but to rest on a business basis, more is necessary. Posterity should not bear the burden by keeping the reserve always intact but by actually retiring the demand credits. Redemption in gold on demand is not sufficient. These credits should be canceled just as the bonds have been canceled.

271. *Demand debts a weakness.*—A debt is always a weakness, but especially so when payable on demand. It may be well to examine the claim made by the advocates of the issue of greenbacks that their issue would result in a saving to the government. The argument that turned the tide of battle in Congress was that interest-bearing bonds could be sold only at a considerable discount, whereas the non-interest-bearing notes could be issued at par; in other words, a large saving was to be effected in the interest account.

In an earlier chapter the preference of business men, who deal in goods which are not always marketable, for long over short time debts was pointed out. Furthermore, it was shown that they will often pay a higher rate of interest on long time loans simply to make their business more secure. A good example of the preference has been shown by the issue of $30,000,000 in bonds by Armour & Company of Chicago. These bonds bear 4½ per cent interest and were issued when the commercial rate was less than 4 per cent in spite of the fact that Armour & Company always had a ready market for their short time credits owing to their reputation and the quick convertibility of their product.

The government does not deal in goods at all. Its only method of meeting obligations is by doing so out of its excess of revenue over expenditures or by refunding them. The first must always be a slow process. In its ability to refund only does the government have an advantage over the business man; and even this ability may be crippled at critical times, so that in refunding a loss greater by far than the interest originally would result. It is obvious, therefore, that the proper business policy would be to avoid the issue of demand credits, in spite of the original saving of interest.

272. *Provisions for retiring debt.*—In any event, however, whether a debt so incurred is in the form of bonds or notes, provision for its cancellation should be made. The smaller the debt, the greater the nation's borrowing power; and there is no telling when this borrowing power may be needed. It is not a correct business policy to allow a debt incurred during one period of stress to remain outstanding to reduce the government's credit when another period of stress appears. It should be paid off in prosperous years, so that when another calamity comes the slate will be clean and the government's credit unimpaired.

CHAPTER XV

ECONOMIC FUNCTION OF THE BANK

273. *Productive industries classified.*—The economic life of a community consists in the production and consumption of goods. The production of goods becomes more difficult and complicated as the wants of men grow and a great number of auxiliary institutions become necessary. Banking is one of these institutions, developed to assist in the production of goods.

The institutions which carry on the process of production may be classified in three groups.

1. Those whose purpose it is to extract raw materials from the earth and to adapt these raw materials to human wants—therefore, the activities of agriculture, mining, manufacturing, etc.

2. Those whose purpose it is to transport materials and finished goods to the place where they can be most advantageously used.

3. Those whose purpose it is to assist in transferring the ownership of materials and finished goods so that they may come into the possession of those persons who can use them most advantageously—therefore, the activities of retail and wholesale merchandising, brokerage, coining and issuing money, banking, etc. This third group of economic activities is not absolutely necessary to the economic process but is a consequence of the private ownership of materials and the means of production; under a thorough socialistic regime these institutions would be superfluous.

274. *Recapitulation of fundamental principles.*—Under our present system of private ownership of wealth and the division of labor in production, frequent transfers of ownership are required. Exchange is an absolute prerequisite to any but the most primitive form of production. Only an insignificant portion of the goods produced are consumed by the producer; they were made to be exchanged for other goods. In the process of manufacture most goods change hands many times before reaching the consumer.

These elementary economic facts are recapitulated for the purpose of emphasizing the importance of exchange in our economic life. Under an economic system of private property there could be no civilization without the means of exchanging one form of property for another.

The exchange of one goods for another, however, involves considerable difficulty. In any exchange there must be two parties, each desiring the article which the other wishes to part with, at the same time and place. These conditions must coincide in order to make an exchange possible. These obstacles in the way of barter led early to the use of money, which was a commodity enjoying so universal a demand that everybody was willing to accept it in exchange for his goods.

In order that production shall be most successfully carried on—that is, that goods of the highest quality shall be produced in the largest quantity, it is necessary that each person shall be set to do the thing at which he is the most skillful and that he shall be able to make use of the proper tools and materials. It is necessary that the capital resources and the labor force of the country should be brought together and organized in the most efficient way. The number of persons who are capable of becoming organizers of industry—entrepreneurs—is limited, and these are not usually the owners of capital. If the community is to utilize the expert abilities of these capable but propertyless entrepreneurs, a method must be provided by which they may come into possession of capital without being required to give an equivalent value immediately. So we have the institution of credit, which is the third step in the development of exchange—barter, money, and credit.

275. *Credit.*—A credit is a deferred payment. In exchange for valuable property, one of the parties to the transaction gives his promise to pay a certain sum of money in the future, or, in other words, he gives his creditor the right to receive a certain sum at a future time. The value of this right depends of course upon the certainty of payment at the future time. This depends further upon the character and ability of the debtor and upon the aid afforded by the law in enforcing payment. A credit, therefore, is a contract to pay money, and is usually evidenced by a written instrument for the further protection of the creditor and for the purpose of making the contract negotiable. The fact that credits in the form of negotiable instruments are transferable add enormously to their utility as media of exchange.

276. *Bank a dealer in credits.*—The business of a bank is to deal in credits; it is a market for the purchase and sale of credits. It is an institution the function of which is to assist in the exchange of goods by facilitating the use of credit as a medium of exchange. It is with credit as with any salable commodity—the existence of a market where it may be bought and sold increases its use because a demand for it is always assured. Banks are an economic benefit to the commu-

nity to the extent that they promote the exchange of goods and services, to the end that the material resources (capital) and the labor force shall be most advantageously employed in the best possible organization and that the finished products shall find their way, with the minimum of delay and difficulty, to the best markets.

Every exchange, excepting mere barter, involves the use of a medium of exchange. Money and credit are the two media of exchange. The term "money" is now used by economists to mean simply the standard of value which, in most countries to-day, is gold. Where the gold standard prevails, all other forms of currency—token coins, government notes and bank notes—are credit currency. The government usually undertakes to provide and regulate the metallic coinage of the country, but leaves to the banks the task of providing and handling the credit currency. The United States goes further than most European countries in concerning itself with the credit currency of the country by issuing "greenbacks," and Treasury notes, and by guaranteeing the redemption of national bank notes.

In England, as well as in most of the larger European countries, to the banks is delegated the function of managing the credit currency; of course, under restrictions more or less stringent. The point to be observed in this, and one which has been urged by several of our recent writers on money, notably Conant in his "Principles of Money and Banking," is that the handling of credit, even of credit currency, is properly a banking function rather than a governmental one.

Credit as a medium of exchange varies in form all the way from a national bank note, which passes from hand to hand as freely as a gold coin, to a mere verbal promise to pay evidenced by a memorandum in a ledger which, often as it has served in one exchange, is but rarely negotiated further. Arranged in the order of their negotiability (their serviceability as media of exchange) between these two extremes, we have the certified check, check, draft, bond, promissory note, etc.

277. *Banks supply a medium of exchange.*—Banks perform the function of supplying a medium of exchange in two ways: (1) by the issue of paper money intended for general circulation, as the national bank notes, and (2) by granting, in exchange for a cash deposit or an interest-bearing note, its own credit which can be used by the customer as means of payment by drawing a check against the bank.

The function of providing a medium of exchange for a community is essentially a public one and is peculiarly liable to abuse if left without restriction in the hands of private parties. Before the Civil War this country suffered severely from badly regulated issues of bank money and, since the National Bank Act, the right to issue paper money has been limited to national banks under very strict regulations.

278. *Banking is a quasi-public function.*—The right to furnish a medium of exchange by the system of checks and deposits still belongs to every bank, but in all cases it is regulated either by federal or state statutes. Minimum cash reserves are required to be kept and in many other ways the public nature of the business is recognized.

Besides the quasi-public function of providing a medium of exchange by the use of credit in one form or another, banks have another function closely allied to it and sometimes scarcely to be distinguished from it—to supply temporary capital to industry in the form of short time loans.

In this age, scarce any industry can be carried on without capital. It is very rare also that the best promotors and managers of industry are the proprietors of the large amounts of capital necessary to carry on the business. On the other hand, a large portion of the country's capital is in the hands of those who have no ability to employ it successfully or it is scattered about among the people. To get this capital into the hands of the entrepreneurs who can employ it most profitably is a function largely assumed by banks.

279. *The bank a distributor of capital.*—Capital is employed in industry in two ways. Some of it must be invested in the plant and machinery; this is fixed capital. Another installment must be invested in materials, labor, incidental expenses of production, etc., the necessity for which arises out of the length of time required to manufacture and market the product. There is naturally great variation in the length of the period of production in the various industries. In some of them this circulating capital must be tied up for weeks, in others for years.

The distinction between circulating and fixed capital is that the former after a period reappears in the form of a salable product from which is realized the value of capital invested and something more in such shape that it can be reinvested; in other words it is fluid, whereas fixed capital remains in the form in which it is invested and only becomes fluid as a replacement or depreciation fund is accumulated or the plant is sold.

This distinction has great value in the science of banking, for as we shall see later, the credit which a bank loans has a very precarious existence and it may become necessary to withdraw it at any moment from the enterprise in which it is invested. The restrictions which legislation has placed upon the manner of loans a bank may make are really based upon this principle.

280. *Banking principle.*—A large proportion of the bank failures of the country is caused by a violation of this fundamental banking principle. The National Bank Act forbids banks to loan on real estate or mortgages. The idea back of this is to prevent the locking up of funds in fixed capital. The failure of the three Walsh banks in Chicago in 1906 occurred because the funds of the banks had been used to build railroads which some day may be very profitable, but which for the present tie up capital where it cannot be easily turned into a means of payment.

The reasons why bank funds should not be tied up in the form of fixed capital are:

(1) The value of the investment may be unstable.

(2) The value of the investment may depend on the completion of the whole plant, as in the case of the Walsh railroads.

(3) The value of the investment may depend upon a monopoly or upon the ability of one man, so that if the peculiar advantage ceases to exist the property shrinks in value. New processes may make old plants entirely obsolete and destroy their value.

281. *Double function of commercial banks.*—The function of a modern commercial bank is therefore twofold: (1) To provide a means of payment and (2) to provide temporary capital for the use of industry. It will perhaps be well to show briefly how these functions were developed.

One of the early banks, the Bank of Amsterdam (1609), was practically a warehouse for coin. Holland was the commercial center of Europe at that time, and the currency in circulation was a heterogeneous mass of the coinage of all the neighboring and distant countries, of uncertain value and frequently mutilated. Such a currency served the needs of commerce very badly, and the Bank of Amsterdam was organized to relieve the difficulty. It received deposits of this miscellaneous currency, calculated its value on the basis of a fixed standard and permitted the depositor to transfer his credit at the bank. The deposits were all kept intact in the bank, or at least were supposed to be. As a matter of fact, the sight of so much idle money seemingly doing no good to anybody in time proved too strong a temptation to the management and they from time to time permitted large sums to be used in financing hazardous ventures, principally the colonial enterprises of the Dutch East India Company. When these facts became notorious the depositors lost faith in the bank and it was compelled to suspend. This bank performed a banking function in that it provided a good medium of exchange, but it did not deal in credit in any other sense than a grain warehouse man who is simply under obligations to return the deposit on demand.

In the Bank of England (1694) we find the banking functions considerably developed. In consideration of a loan to the government, which at that time was in sore need of funds, the subscribers were given the exclusive right to organize a bank which should have the privilege of issuing notes payable to the bearer and which were intended to circulate as currency.

Here we have the essential element in banking—an organization which is able in some way to create credit at small expense and which it may loan out to the public, deriving an income therefrom which leaves a net profit above expenses. In other words, the bank is able to produce something cheaply and to rent it out at a certain rate per cent. The following features were a part of the creation of the credit of the Bank of England:

(1) A subscription of funds which should be loaned to the government at 8 per cent.

(2) Notes must be printed, counterfeiting guarded against, an office for doing business and redeeming the notes must be maintained.

(3) A demand for currency must exist so that the notes will remain outstanding.

282. *Peculiar privilege of bankers.*—There are a great many persons and firms who can create credit, but the banker is the only one able to derive an income from loaning it out. The reason of this is that the bank-credit is in such form that it can be used as a means of payment and, therefore, will be received and held by the public so long as there is need for it to do the necessary work of exchange.

Naturally a business in which the stock-in-trade can be produced at very little expense and can be loaned out at from 5 per cent to 25 per cent per annum is peculiarly attractive and liable to abuse. Until the passage of the National Bank Act, the United States had to suffer many and heavy losses through the insufficient regulation of this important function. It took us all those years to learn that the function of supplying the currency of the country is a public one and should be delegated to private parties only under the most stringent regulations.

Under our present laws the privilege of issuing bank-credit to be used as currency (the national bank notes) costs the bank nearly as much as the income derived from loaning the notes and, furthermore, a large part of the country's need for credit currency is supplied by the government itself by issues of "greenbacks" and Treasury notes.

By far the largest portion of the payments in business transactions are made by the use of credit in another form than currency, that is, by means of the check or draft. The service of the banks in providing currency is really insignificant when compared to their service in furnishing a method of payment by check.

The essential element in the check system is the same as in the bank-note system, viz., bank credit. Instead of selling, or more properly, loaning its credit in the form of bank notes, at a certain rate per cent, the bank loans the right to draw checks against it, which checks can be used as a means of payment, but to a much more limited extent than bank notes and with a much more restricted circulation. The principle underlying both systems, however, is the same.

The peculiar characteristic of a bank is the privilege of using its credit as a medium of exchange. This gives its credit a utility enjoyed by the credit of no other organization except the government. Because its credit has this utility it can be kept outstanding without the payment of interest. The principal business of the bank is to exchange its own credit, in the form of bank notes or a deposit credit on its books against which checks may be drawn, for the credit of someone else in the form of a promissory note bearing interest. Under ordinary circumstances neither the bank notes nor the deposit credits bear interest, consequently the bank gains by the transaction a gross profit equal to the interest on the promissory note. In order to make this profit it is necessary that the bank-credit should be kept outstanding and not be returned to the bank for payment.

Credit is simply a deferred payment and this bank-credit represents a payment due at any time the possessor chooses to call for it; if it is in the form of a bank note he may present it for redemption in cash; if it is in the form of a deposit-credit he may draw a check and cash it at the bank. Now, if bank notes were redeemed soon after their issue, or if deposit-credits were checked against and the checks cashed soon after the credit was granted, the bank would not be able to keep its credit, having no interest outstanding. It would gain the interest on the promissory notes purchased but, since it had to pay cash for them ultimately by redeeming the outstanding credit given for them, the whole transaction would be equivalent to loaning money at the current rate of interest, nothing more or less.

In actual practice, however, the bank is not compelled to redeem its credit in cash immediately, but is able to keep it outstanding for some time. In case the bank puts out its credit in the shape of bank notes, the public need for currency keeps them circulating from hand to hand and serving the same purpose as money; as there is no need to exchange them for money the bank is not called upon to redeem them. However, this no longer applies to banking in the United States since the privilege of issuing bank notes freely has been taken away from the banks by the National Bank Act.

Under the present system of banking in this country the banks can no longer put out their credit in the form of bank notes, except in the case of national bank notes where the restrictions upon their issue are so many that their character is quite changed; they no longer represent the credit of the issuing bank but the credit of the government in the shape of a United States bond. Having been deprived of this one method of keeping their credit outstanding by the issue of bank notes, the banks have made use of another method, the check and deposit system, which serves the same purpose but which is more difficult to understand.

283. *Banks do not create capital.*—Dunbar says in his little book, "The Theory and History of Banking":

> It is obvious that the bankers create no new capital by their lending and deposit holding, but it is equally plain that they direct the stream of capital to the enterprises and industries requiring such support, and that they quicken the succession of commercial and industrial operations. A given amount of capital is thus made more effective, so that the result of the introduction of banking in any community is the equivalent of a considerable increase of capital, although not implying any real increase in the first instance.

Industry is impossible without two things: Capital and management. Very frequently the class of persons owning the capital are not capable of employing it in industry to the best advantage, and many persons of ability have no capital. It is the function of the bank to bring the two together for their mutual advantage and thus promote industry.

It is important to get the distinction between capital and capital goods. Capital goods are those material things which are employed in the further production of goods, such as machinery, factory buildings, raw materials, and goods in the hands of merchants. Capital is a certain sum of value—so many dollars worth—from which the person owning it expects to get an income. Capital goods wear out and disappear, but capital survives in the form of replacement and sinking funds under normal conditions.

A factory may be turning out some form of capital goods—machinery, for example—and at the same time there may be entrepreneurs desiring to make use of that machinery in production but having no ready funds. The makers of the machinery cannot part with the machinery unless they get some form of medium of exchange with which to pay their bills for wages, materials, etc. The bank steps in at this point and enables the two parties to get together to the advantage of both themselves and the community. The machinery company either takes a note from the entrepreneur and gets it discounted at the bank, thus changing a non-circulating form of credit into a medium of exchange with which they can pay their bills, or they sell the machinery on time and borrow from the bank enough to pay running expenses until the account shall have become due.

Production requires a lapse of time and the owners of the capital employed must wait until the goods produced are sold before they can get back their capital. The bank takes the burden of waiting from those who have to employ their capital more rapidly and places it on those who are content to wait so long as they get an income for it.

284. *Source of capital and credit of bank.*—The sources of the capital and credit which is the stock in trade of the bank: (1) Capital stock subscribed by stockholders, and (2) deposits of cash. On the basis of the funds thus provided the bank is able to create a large amount of credit which, when loaned to entrepreneurs, serves the purpose of actual capital because with it they can purchase the capital goods they require. Credit is a substitute for money in making exchanges

and may be compared to airships which in the near future may render superfluous railroad tracks and right-of-way.

285. *Operations of a bank.*—The operations of a bank are three: Discount or loaning, deposit, and issue. In discounting or loaning, the bank buys from the customer a non-circulating credit in the form of a promissory note and pays for it with cash or, what is much more frequently the case, with its own credit in the form of bank notes or a deposit credit, either of which are circulating and can be used as a medium of exchange.

In dealing with the bank the customer may either sell (discount) notes of other people which he has taken in trade, or he may sell his own note with these trade notes as collateral security, or he may sell his own note with or without some collateral. We have now to consider what it is that the bank gives in exchange for the right to demand and receive money at a future time which is acquired by it under these circumstances. In the case of discount the proceeds of the discounted note (face value less interest) are placed to the credit of the customer, to be drawn out by him by means of checks to suit his convenience. The customer has given the bank the right to demand funds from him at a definite future time in exchange for the right to demand funds from the bank at any time.

The item "individual deposits" in a bank statement does not imply that persons have deposited cash to that amount in the bank; some of it of course represents cash deposited, or checks, drafts, etc., deposited for collection which are equivalent to cash; but the greatest proportion represents credits which have been sold by the bank in exchange for non-circulating forms of credit, i. e., promissory notes, commercial paper, etc.

A bank note is a form of demand liability sold by the bank. It is simply the evidence of the debt of the bank—the same as an entry in a bank book showing that whoever possesses it can claim from the bank a certain sum. The system of checks and deposit is a substitute for bank note issues and developed out of them. England and the United States are the only countries making extensive use of the system, the continental countries still clinging to the bank note.

In the operations we have been considering the subject matter involved is in every case either money or contracts for the payment thereof, viz., credit. No form of dealing in merchandise or real property comes properly within the field of banking.

286. *Responsibility of the banker for proper distribution of capital.*—Mr. Conant says in his "Principles of Money and Banking":

> It is in distributing between depositors, borrowers, and his own vaults the money intrusted to him by depositors in such a manner that he shall be able to repay it according to his promise, that the most delicate and important function of the banker arises. It is in the execution of this function that the modern banker has become the arbiter of the direction of investment, the organization of industry, and even of the fate of nations. Simple as the process is by which the banker transfers to others the stored purchasing power which he has gathered up in small deposits from his customers who have acquired gold or the right to command gold, it is his selection among these borrowers which determines the course of the industrial progress of the nation.
>
> Hence it comes that the banker, in the financing of important enterprises, can within certain limits determine whether a given project shall succeed or fail. In every growing community

much of the real burden of deciding upon the course of its future development lies with the banker. It is for him to determine the relative marginal utility of one enterprise as compared with another and to grant his support to the enterprise which promises the highest utility and therefore the most certain profits. Thus there rests upon the banker in a sense the vital function of trustee for the community in its dealings with itself. This trusteeship is especially sacred if he deals with the money of others, as is usually the case, and not purely with money of his own.

The peculiar nature of a bank and the close relation existing between it and the economic welfare of the community is brought out clearly when a failure occurs. In the case of an enterprise of a more private character —a manufacturing or mercantile concern—a failure does not ordinarily bring such disastrous results as the failure of a bank, because the parties injured expected to take a risk and usually have means of protecting themselves.

A bank failure, on the other hand, throws a direct loss on a great many people who have not calculated on any risk. Furthermore, there is an indirect loss of confidence in banks. This leads people to withdraw their deposits and go back to the more primitive and expensive methods of exchange, thus retarding the economic development of the country.

Our prosperity is owing to a large extent to the devices which make exchange easier and cheaper, just as better railways and steamships increase our welfare by promoting that form of exchange. Banking devices, the use of checks against deposits, etc., are just as important as inventions which help to annihilate distance.

The banks have so important a role to play in the disposition of the circulating capital of the country that they can cause a very serious complication when, by departing from the true rule of banking and in hope of gaining large profits, they invest these circulating funds in enterprises of a speculative character and by so doing convert circulating into fixed capital.

CHAPTER XVI

DEPOSIT CURRENCY

287. *Analysis of credit.*—A bank loans its credit, as a general rule, rather than cash. We shall have to prove this statement, for the average banker will insist that he loans cash.

Credit is the promise to pay money at a future time and arises out of an exchange in which property, services, or some valuable thing is exchanged against a promise to pay an equivalent value in the future. The transaction is not complete until the promise is discharged. A credit is created, therefore, by a transfer of value which is still incomplete, one of the parties as yet not having performed his part of the contract; in lieu of property, the second party gives the right to receive from him value at some future time. Having been once created, this credit—this right to receive value—is regarded as property and may be transferred as any other form of property is transferred. Whoever possesses the legal right to receive this value may demand it of the debtor when it is due.

As a medium of exchange, credit is superior to standard money in that it does not involve the transfer of intrinsically valuable commodities produced at great cost. The function of the bank is to promote the use of this inexpensive substitute for standard money—credit. It does so by affording a market wherein credits can be bought and sold. A typical illustration of this important service to the business of the community is as follows:

288. *How credit promotes industry.*—The process of producing from the raw material a cotton garment before it reaches the consumer requires months of time and the participation of many separate industries. The raw cotton must be grown from the seed, ginned, baled, transported, carded, spun, woven into cloth, cut and sewed into the form of the garment, transported, and sold to the jobber, then to the wholesaler, to the retailer, and finally to the consumer. Practically every step involves an exchange in which a *quid pro quo* is necessary. For example, a cotton-mill owner cannot perform his part in the chain of production unless he can possess himself of the raw cotton and hold it long enough to make it into cloth. If he has no equivalent to exchange for the cotton, he is estopped from business. The owner of the raw cotton, perhaps, cannot wait sixty or ninety days for his pay and he cannot, therefore, accept the credit of the mill-owner in exchange unless he can sell that credit for cash. The credit of the mill-owner, in the form of a promissory note, is not a medium of exchange which the cotton dealer can use to pay his obligations. The bank, however, stands ready to buy that note and give for it something which can be used as a means of payment. The bank, a market for negotiable commercial paper, has made possible the exchange of cotton, and the industry of the country has been aided. Because a market for credit exists, exchanges can take place which would otherwise be impossible.

289. *Banks create credits.*—Besides furnishing a market for credits already in existence, banks engage in transactions in which credits are created by receiving

deposits and making loans. In exchange for cash deposited, the depositor receives the promise of the bank to repay the sum on demand. This is evidenced by an entry in the pass book of the depositor. The bank redeems its promise, either partially or entirely, whenever it accepts a check drawn upon it by the depositor.

In loaning money, the bank may exchange cash for the promise to pay of the borrower, either on demand (a call-loan) or at some stated future time (a time-loan). This, however, is not the usual transaction.

Ordinarily, when the bank makes a loan it is to a regular customer who has an account. In this case the borrowing customer receives, in return for his promise to pay, a credit on his deposit account against which he may draw checks. In this transaction the bank exchanges its own promise to pay money on demand for the promise of the borrower to pay a larger sum at some future time or, if it is a call-loan, on demand; the whole matter is simply an exchange of credits. It is because the borrower rarely takes cash from the bank but prefers to accept a deposit credit, that the loan and deposit items of the bank statement correspond so closely in amount. Most of the deposits of a bank are created in this way; the rest are created by the deposit of cash or cash items.

The deposit item of a bank is not, therefore, a record of the sums of money brought into the bank by customers, although it includes such sums; it represents, rather, the demand liabilities of the bank (excepting its circulating notes outstanding)—that is, the sums it may be called upon to pay at any time.

Is it not clear, therefore, that what a bank loans is not cash but its own credit? It is a simple matter of fact that the borrower does not take money when he gets a loan but takes instead a credit on the books against which he can draw checks, that is, he accepts the promise of the bank to pay on demand, which is a deposit credit. The very fact that a deposit credit is payable *on demand* does not make it any the less a credit.

290. *Bank credit preferable to cash.*—Why do persons borrow from the bank unless they need the money? Why are they willing to pay interest on funds which they leave in the bank? Why are they willing to take the credit of the bank instead of cash? Answers to these questions involve a study of the business habits of the business community.

A business man borrows from a bank in order to get something with which to make payments; not usually immediate payments, but payments falling due from time to time within a month or more. The most convenient method of making payments is by means of a check drawn against a deposit credit at the bank. The chances are, however, that it will be some time, perhaps several weeks, before the business man who made the loan at the bank will have given out checks for the whole amount of the loan and in the meantime he may be receiving funds which are deposited in the bank. Furthermore, before the loan falls due, he begins to accumulate a deposit so that when the loan matures he has simply to draw a check in favor of the bank in order to cancel the debt. The bank has had the use of the funds, for which the customer has been paying it interest, for some days after the loan was made and for some days before it is repaid.

291. *Shifting of bank credit without liquidation.*—But there is still a further advantage to the bank. In the first place, the checks given out by the depositor are not presented at once for payment but may go to a

distant city and pass through many hands before they find their way to the bank. During all this time, perhaps for a week or two, the bank has the use of the funds. Even when the check comes back to the bank, the bank does not ordinarily have to part with the funds represented by the check, although the drawer has ordered the bank to pay to the presenter the amount. If the check falls into the hands of a customer of the bank, he will take it to the bank and increase his deposit account instead of asking for cash. As a rule the check will come into the possession of a person who is the customer of another bank and he will increase the deposits of that bank. This bank will present the check to the bank, which is liable for its payment, for payment through the clearing house.

Yet even now the debtor bank need not part with the cash, for on the preceding day it has received on deposit from its own customers checks on the bank holding the check against it. They simply cancel off their mutual obligations, perhaps paying a small balance the one to the other. Still the money remains in the bank. In fact, the only time the bank is called upon to redeem its demand obligations is when a check is actually presented at the teller's window for cash payment or when the balances at the clearing house are running against it.

The bank statement in the following chapter shows that demand liabilities (deposits) of the banks are usually four times as large as their cash on hand. Experience has taught them that a cash reserve is amply sufficient to meet all demands for cash payments which are likely to appear. Three-fourths of their demand liabilities represent the bank's own credit which it is able to keep outstanding because the business community prefers to use checks rather than cash as a medium of exchange. This credit of the bank serves all the purposes of money and the bank can get interest for the use of it just the same as if it were cash.

292. *Similarity of checks and bank notes.*—It is precisely the same as if the bank loaned its credit in the shape of bank notes. Before the Civil War, when there was no restriction on the issuing power of banks, the borrower received from the bank its notes, that is, its promises to pay on demand; to-day the borrower receives the promise of the bank to pay, but in the shape of a deposit credit which really amounts to exactly the same thing. Checks, based on these deposit credits, circulate as a medium of exchange, although in a more restricted way than the old bank notes. Nobody will deny that a bank note is simply the promissory note of the bank and that the bank loaned its credit when it gave bank notes to borrowers. Why should anybody deny that a modern bank loans its credit when it gives to the borrower a deposit credit?

293. *Limits of earning power of the bank.*—The main source of the bank's profit is the interest received on loans and discounts, and it follows that the profit varies directly with the amount of loans made. What then is the limit to the amount of loans a bank can make? The National Bank Act sets no direct limit except that it forbids any national bank to loan to any individual or firm an amount greater than one-tenth of the bank's capital. Indirectly, it places a limit on loans by providing that national banks shall keep a reserve which shall not fall below a certain percentage of the net deposits. When a bank gives a loan it must either part with that amount of cash, thus reducing its reserve, or it must give a deposit credit, thus increasing its net deposits; in either case it has increased the ratio between

reserve and net deposits, and the limit to which this ratio may be increased is one to four, which is the same as saying that the reserves must be 25 per cent of the deposits.

294. *Difference between a cash and credit loan.*—When the bank loans actual cash instead of credit, it increases the ratio between reserve and deposits four times as much as when credit is loaned. For example: A bank with deposits of $1,000,000 and a reserve of $300,000 (the ratio between them being 1:3 1-3), loans $100,000. If the borrower takes the cash from the bank, the deposits remain as before but the reserve has fallen from $300,000 to $200,000, thus changing the ratio of reserve to deposits to 1:5, which means that the reserve is only 20 per cent of the deposits, and this is below the legal minimum if the bank is a New York national bank. Suppose, on the other hand, that the borrower accepts a deposit credit instead of demanding cash. The deposits have increased to $1,100,000, while the reserve remains as before at $300,000, the ratio in this case rising to 1:3 2-3. When the borrower took cash, the ratio changed from 1:3 1-3 to 1:5; when the borrower took credit, the ratio changed from 1:3 1-3 to 1:3 2-3. In the first case, the reserve was depleted below the legal limit; in the second case, the bank could still loan another $100,000 before it reached the limit. There can be no question as to whether the bank would prefer to loan its cash or its credit.

295. *Cash a precious commodity at times.*—It becomes easier now to see the reason why cash is such a precious commodity in Wall Street; not because cash is a medium of exchange, for Wall Street uses very little of it in transacting its business, but because cash is the basis of credit which *is* the medium of exchange.

Hence the rivalry among the banks to secure cash deposits, for cash deposits mean larger reserves, larger reserves mean new credit created to three times that amount, new credit means larger loans and consequently increased dividends. Hence, also, the great disturbance caused by the withdrawal of a few millions of cash deposits, such as when withdrawn by the country banks to "move the crops." Withdrawals of cash mean depleted reserves, which condition creates a shrinkage of bank credit and a reduction of profit-making loans.

More than that, the contraction of credit—the medium of exchange in 99 per cent of the important transactions of the market—has the same effect as the retirement of a large portion of the circulating medium. The effect of the movement of a few million dollars westward to move the crops would be an unimportant matter if it involved the contraction to that amount simply of the medium of exchange; under present conditions it involves a contraction of three times or more of the amount.

Those great accumulators of cash, the country banks, the savings banks, trust companies, investment companies, and insurance companies, have in their power the control of the money market, for the cash at their disposal forms the basis of a vast structure of credit on which the business of the financial center of the country rests. The dangerous element in the situation arises from the instability of this foundation, for the withdrawal of cash from the reserves of the banks causes the collapse of the superstructure, credit.

In view of these facts the rate of interest which the New York banks pay for cash deposits, 1½ per cent or 2 per cent, is a small matter. For every dollar of cash deposited they are enabled to loan credit to three times the amount at from 2 per cent to 6 per cent, thus making a gross profit of from 5 per cent to 15 per cent on the deposit.

The word "deposit" is ambiguous and has a dual nature. When a banker asserts that he makes 5 per cent gross profit on his deposits, he uses the term as meaning demand liabilities outstanding (excepting, of course, circulating notes). A deposit of cash in a bank, however, means something more than an increase of that amount of the demand liabilities of the bank; it means an increase of reserve to that amount, on the basis of which the bank is justified in increasing its demand liabilities by three times the amount deposited, and this it usually does if there is a market for the loans. On the receipt of a deposit of $1000 cash, the bank does not put $250 in the reserve and loan $750; it puts $1000 in the reserve (for the reserve is not a special fund, but represents practically all the cash on hand at any particular time) and increases its loans and demand liabilities (deposits) $3000, if it is a national bank, or more if it is not.

296. *Problem of the reserve of greatest importance.*—The problem of what constitutes a sufficient reserve is one that engages the mind of bankers at all times. The amount of credit which they can keep afloat and upon which their profits depend is determined by the size of the reserve which they can hold in their vaults. It is obvious that if a large proportion of the demand credits are presented at any one time that the bank cannot meet them. This happens only when some event occurs that shakes the confidence which the depositors have in the bank. If the bank cannot dispose of its assets by borrowing from the other banks, it must fail. In addition to this danger there are certain times of year, varying

in different localities, when banks increase their reserves. It may be that more actual money is used in hand to hand transfers, or that the banks expect a demand for local loans that causes them to increase their reserves. When there is any general movement on the part of the country banks toward increasing their reserves, such as takes place every year when the crops start to move, the withdrawal of actual money from the reserve cities causes bank reserves there to fall in volume. Conversely, when the demand for money in the interior subsides, the money flows back into the reserve city banks, and their reserves are thus increased. Hence a reserve which is sufficient at one time of year may not be at another; and reserves which are sufficient during a period when the granting of credit is on a normal basis may be lamentably insufficient when there is a general demand for liquidation.

297. *Lack of coöperation causes banks to lose reserves.*—Unfortunately, under our present system, there is very little coöperation between the banks of different cities when demand for liquidation becomes general. Each bank does everything in its power at such times to increase its reserve, and it must all be at the expense of some other bank. The writer knows personally of several banks which increased their reserves during the recent panic until they totaled 75 per cent of their deposits.

298. *Methods of increasing reserves.*—At such times there are only two ways of increasing the total of the country's bank reserves until they begin to be increased automatically by the gradual liquidation of credit. The most common method is to negotiate for gold abroad. This is slow, however, and is apt to be expensive. The second method is by the deposit of Government funds

with the banks. This was of great assistance during the panic of 1907, but it could be taken advantage of by the holders of certain securities which the Government offered to accept as collateral for the loan. Since that experience the law has been changed so that the list of acceptable securities has been greatly enlarged; and thre is no doubt but that the new arrangement would prove of value if the experience should be repeated. This presupposes, however, an available surplus of money in the United States Treasury, on the presence of which it is not safe to rely.

299. *Secondary reserve.*—A great many banks, in addition to their cash reserve, carry what is sometimes known as a secondary reserve. The cash reserve means money on hand and deposited in other banks. The secondary reserve consists of any securities which are readily marketable. Railroad and such municipal bonds as are listed on the New York Stock Exchange are the most popular, because they are bought and sold daily, and the banker may always ascertain their market value by recourse to the daily paper. There are certain issues which are very active on the exchange, hence they best serve the bankers' purpose. Because of this, many bankers fall into the error of thinking that any bond which is listed is readily marketable. There are a great many issues, however, which are listed but for which it may be far from easy to find a market. It may be that the issue is small and not widely known; or it may be that the bonds are closely held by a few interests. In either case the issue is not active, and the bonds will not always sell readily.

The great fallacy of the theory of investment in listed bonds on the assumption that they are salable, however, is more fundamental. Even when a bank selects as a secondary reserve, bonds which are active, it does not follow that they can be sold when there is a general demand for liquidation. The same issue of bonds may be held by a thousand banks over the country on the same theory and it is needless to say that they cannot all convert them at the same time. If any of them sell, it will be at a great sacrifice in price, and with each sale the price declines still further.

300. *Unreliability of bonds as reserves.*—It must not be supposed from this that investment in listed bonds is unwise. In practice they have many times proved to be a very valuable asset, but generally for a somewhat different reason. First, they are readily marketable except during panics, so that if a bank wishes to realize on its bonds for reasons peculiar to itself it may do so without great loss. Furthermore, in the panic of 1907 the city banks refused to redeem any credits in cash, so that even if bonds had been sold on the exchange, the sale would not have obtained for them any currency. This action, however, enabled them to make more loans than they otherwise could have made, and the bonds of their country correspondents were very acceptable collateral. When the country banks saw the market price of bonds falling off, they preferred borrowing with their bonds as collateral to selling, especially as neither alternative netted them any actual currency.

301. *Aldrich-Vreeland act.*—Most important of all in making bonds a valuable asset in a panic is the Aldrich-Vreeland act, passed by Congress in 1908, which recognizes the security of certain bonds by making them acceptable as collateral to secure deposits of money from the Government. Prior to the passage of this act, Government bonds only could be used to secure Government deposits, and Government bonds are an expensive asset.

CHAPTER XVII

BANK STATEMENT—RESOURCES

302. *Combined statement.*—In passing from the theoretical to the practical discussion of banking, it is well for the student to become familiar with the bank statement. It is a summing up of all the transactions of the bank—a condensed record of all the books of account—and every transaction, no matter how small, produces a change in the statement. An understanding, therefore, of all the items of the bank statement will provide a good introduction to the actual practice of the business.

The statement reproduced in section 303 on page 261 is the combined statement of all the national banks in the country. The federal law provides that each national bank shall make a report to the comptroller of the currency at least five times each year. The dates for making the reports are not fixed but are announced by the comptroller at intervals. It is a peculiarity of the banking business that it may have a complete report of its financial condition at the end of each day. In a mercantile or manufacturing establishment it is possible to have such a statement only after an inventory of the stock on hand is taken. The assets of a bank are of such a nature that the perpetual inventory can be kept.

It was thought best to take the report of all the national banks rather than a statement of any single bank; the items are exactly the same and the relation between the different amounts is more typical of the average bank than any single statement could be.

303. *Proof of the deposit currency theory.*—Furthermore, the figures showing the relation between loans, deposits and reserves, are the best proof that can be offered as to the validity of the deposit-currency theory presented in the preceding chapter. It will be observed that the total volume of loans and discounts in the 6544 national banks in 1907 was but little over four and a half billion of dollars. The individual deposits, or the amount due to depositors of all sorts except banks, was a little less than four and a half billion dollars. The amount of reserve, including the specie and legal tender notes and 5 per cent redemption fund, amounted to something over one billion dollars, or 20.8 per cent of the deposit liability. Since the total amount of money of all descriptions in this country is only a little more than three billion dollars, and since the deposits in the state banks and trust companies, combined with the figures given, will make a total of over twelve billion dollars, it requires no argument to show that the item "deposits" does not represent cash deposited but rather credit extended by the bank. There is not enough actual cash in the whole world to pay the depositors of the banks of the United States if they should suddenly desire to exercise their legal right and all at once call for payment of their deposits.

COMBINED REPORTS REQUIRED BY THE COMPTROLLER OF THE CURRENCY FROM THE NATIONAL BANKS.[1]

BANK STATEMENT.

6,544 BANKS AUG. 22, 1907.

RESOURCES:

1. Loans and discounts on which officers and directors are liable, either as payers or indorsers.	
Loans and discounts on which officers and directors are not liable as payers or indorsers	$4,678,583,968.99
2. Overdrafts, secured, $———, unsecured, $———	30,443,119.51
3. U. S. Bonds to secure circulation, par value	557,277,950.00
4. U. S. Bonds to secure U. S. deposits, par value	95,628,650.00

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[1] Report of Comptroller of Currency, 1907, p. 9.

5. Other bonds to secure U. S. deposits	68,198,039.03
6. U. S. bonds on hand	7,390,840.00
7. Premium on bonds for circulation; premium on other U. S. bonds	14,554,194.17
8. Bonds, securities, etc., including premium on same	700,352,456.58
9. Banking house; furniture and fixtures	160,845,896.15
10. Other real estate owned	20,241,913.97
11. Due from National Banks (not approved reserve agents)	334,571,435.56
12. Due from State and private banks and bankers, trust companies and savings banks	123,020,454.14
13. Due from approved reserve agents	614,496,352.27
14. Checks and other cash items	26,905,246.13
15. Exchanges for the clearing house	190,602,163.58
16. Bills of other national banks	31,240,127.00
17. Fractional paper currency, nickels and cents	2,314,530.17
18. Lawful money reserve in bank, specie, legal tender notes.	701,623,532.52
19. Redemption fund with the U. S. Treasurer	27,305,679.43
20. Due from the U. S. Treasurer	4,731,853.60
	$8,390,328,402.80

LIABILITIES:

21. Capital stock paid in	$ 896,451,314.00
22. Surplus fund	548,303,602.00
23. Undivided profits, including amounts set aside for special purposes. Less current expenses and taxes paid	186,554,151.85
24. Circulating notes secured by U. S. bonds. Less amount on hand in Treasury for redemption or in transit	551,949,461.50
25. State bank circulation outstanding	30,419.50
26. Due to National Banks (not approved reserve agents)	823,680,087.29
27. Due to state and private banks and bankers	395,745,494.77
28. Due to trust companies and savings banks	337,927,872.50
29. Due to approved reserve agents	38,139,918.96
30. Dividends unpaid	1,583,606.56
31. Individual deposits subject to checks. 32. Demand certificates of deposit. 33. Time certificates of deposit 34. Certified checks. 35. Cashier's check outstanding.	4,319,035,402.62
36. U. S. deposits	143,282,393.15
37. Deposits of U. S. disbursing officers	17,755,770.92
38. Bonds borrowed	59,994,634.56
39. Notes and bills rediscounted	14,415,550.30
40. Bills payable	44,760,529.68
41. Reserved for taxes	4,358,763.69
42. Other liabilities	6,859,429.01
	$8,390,328,402.80

304. *Double-entry system.*—The first thing to be noted about the statement on this page is that the two columns of resources and liabilities exactly balance each other to the cent. The reason of this is to be found in the system of double-entry bookkeeping by which every transaction is recorded twice, so that it is impossible to

alter the credit or resource side without at the same time changing the liability or debit side. Under this system the bank is considered as having no property of its own, but that all its resources above its liabilities belong to the stockholders, and these resources are classified as part of the liabilities under the items capital stock, surplus funds, dividends, profits, and dividends unpaid. These items are liabilities of the bank only in the event of liquidation.

The fact that the resources and liabilities of the bank are equal has no bearing whatever on its solvency. The last statement given out before a bank fails invariably shows the resources to be equal to the liabilities. The discrepancy must be looked for in some of the items: either the resources have been put in at valuations above their real worth, or some item of liability has been omitted or reduced. It is almost always discovered in the event of a failure that loans and discounts contain items which are far less than the figures set down. Under resources are put down all the items of property owned by the bank and all sums due to be paid to it in the future. Under liabilities are placed all the debts owing by the bank and all items representing the equity of the stockholders in the property of the bank. In other words, the liability side of the statement simply indicates to whom the resources belong in case the business of the bank were to be settled up instantly.

305. *Alterations in value of resources.*—The items on the resource side may increase or diminish without any transactions having taken place and therefore without any changes having been made in the liability side. Some of the loans may prove to be bad and non-collectible, or some of the real estate or bonds may increase in market value; profits may be made or losses may be

incurred. It is impossible constantly to adjust the values given in the statement to correspond to the real conditions. In some banks the adjustment is made periodically; in others only when it is discovered that the alteration of value is permanent; and in still others it is never made.

306. *Concealed assets.*—It frequently happens that where the items of property have enhanced in value the figures on the statement are allowed to remain absurdly low, creating what is called "concealed assets." It is considered by a great many bankers an evidence of conservatism to continue to list at a low figure, property worth much more than its book value. There can be no objection to this practice so long as everybody understands the real condition and knows that the statement is a fictitious one. The objection to the practice comes from the fact that even the stockholders do not realize the full value of their stock and may be induced to part with it at a price which they would not consider at all if they knew the equity represented by it.

We will now take up each item separately with such explanations as are necessary to describe the transactions by which it is created.

307. *Loans and discounts.*—This item of assets is in the form of promissory notes of individuals or corporations. The discount represents notes which have been purchased or discounted by the bank at a certain price below their face value at maturity. The difference between the value at maturity and the price paid is called discount, and is at once credited to the profit account, appearing under "liabilities" in the item "undivided profits." "Loans," technically speaking, represents the sum paid out equal to the face of the note; at maturity the bank will receive that amount plus the interest. The

difference between loans and discounts, therefore, is that in the case of loans the bank does not realize its profit until the note is due; in the case of discounts the bank takes its profit when the transaction is made.

Discounting has always been considered the peculiar business of a bank. In Pennsylvania the trust companies are not empowered to discount, but they have the right to loan money and to purchase notes and other obligations. The prohibition of discount does not prevent the trust companies from doing a general banking business; instead of discounting they simply purchase the notes outright or loan the funds on the security of the notes, taking the interest at maturity.

On the back of the bank report are printed certain schedules which must be filled out in order to show more in detail the meaning of the various items. The law provides that "all debts due to an association, on which interest is past due, and unpaid, for the period of six months, unless the same are well secured, and in process of collection, shall be considered bad debts within the meaning of this section."

All such notes must be listed in the schedule, together with all notes which are overdue and all notes representing liability of directors as borrowers. While there is no law limiting the right of the bank to loan to its directors on the same terms as to any other person, it is recognized that the privilege is likely to be abused and hence the banks are asked to make a separate statement of such loans.

308. *Overdrafts.*—Where banking is not conducted on the strictest business principles the depositors are likely to overdraw their accounts. Under certain local conditions of business overdrafts are unavoidable. But the good banker can usually arrange with the depositor

to give a note to the bank for the amount and thus convert the overdraft into a loan or discount. If a certain maximum temporary credit is wanted to draw against, a demand note should be given to the bank, the amount passed to the customer's credit, and when settlement is made the customer should be charged with the interest on the amount checked out.

309. *United States bonds to secure circulation.*—This item represents bonds owned by the bank but deposited in Washington. The law requires the bank to deposit or to own United States bonds up to 25 per cent of its capital whether circulation is taken out on them or not. The value of the bonds is given at par and not at market value.

310. *United States bonds to secure United States deposits.*—The law provides that the funds of the United States not required by the Treasury may be deposited in national banks if United States bonds, or under certain circumstances other bonds approved by the secretary of the treasury, are deposited in Washington as collateral. The secretary may use his discretion as to whether other than Government bonds shall be accepted at all and what bonds may be accepted as collateral security.

311. *United States bonds on hand.*—Sometimes the banks hold Government bonds in their own vaults without using them to secure circulation. It is not likely that any bank would hold Government bonds as an investment, and it is likely that this item represents bonds which it is expected will be sold to customers of the bank or will be required later for securing circulation.

312. *Premiums on United States bonds.*—This item represents the difference between the par value and

market value of the United States bonds owned by the bank.

313. *Bonds, securities, etc.*—This item embraces besides bonds, also stocks, chattel-mortgages, judgments, claims, etc., owned by the bank. The securities which are deposited by borrowers as collateral security for loans do not appear in the statement because they are not the property of the bank until default has been made on the note. Under the law national banks are not allowed to own corporation stocks unless it is necessary to take them in the collection of a debt. This item, therefore, represents practically the bonds owned by the banks. It has increased greatly within the past few years, because many of the banks are dealers in bonds and hold them pending their sale to customers, and furthermore because the ready market which is at hand under normal conditions for the bonds causes the bank to regard them as a form of secondary reserve which can almost immediately be converted into money in case of emergency.

314. *Banking house furniture and fixtures.*—The comptroller has been rather strict in interpreting the law with reference to the holdings of real estate by banks. The large office buildings which have been erected to house the banks as well as to accommodate hundreds of tenants have been erected by separate companies, usually composed of the same stockholders as the bank.

315. *Other real estate holdings.*—This item includes not only real estate but all mortgages and assets representing real estate. The law is very strict in limiting the power of the bank to hold real estate, as indicated in the following provision:

> A national banking association may purchase, hold, and convey real estate for the following purposes, and for no others:
>
> First. Such as shall be necessary for its immediate accommodation in the transaction of its business.
>
> Second. Such as shall be mortgaged to it in good faith by way of security for debts previously contracted.
>
> Third. Such as shall be conveyed to it in satisfaction of debts previously contracted in the course of its dealings.
>
> Fourth. Such as it shall purchase at sales under judgments, decrees, or mortgages held by the association, or shall purchase to secure debts due to it.
>
> But no such association shall hold the possession of any real estate under mortgage, or the title and possession of any real estate purchased to secure any debts due to it, for a longer period than five years.

The object of this provision is to prevent the banks from investing their resources in forms which are not readily convertible into current funds. In former years, before there was so much property other than real estate which could be used as security for loans, the banks were almost forced to take mortgages or nothing at all. In times of stringency when depositors were demanding cash, the banks were frequently embarrassed and forced into insolvency because they could not convert real estate, which under such circumstances is always very unsalable except at a tremendous sacrifice, into funds which would satisfy their depositors.

316. *Due from national banks.*—This represents deposits in other national banks which may not be counted as part of the reserve.

317. *Due from approved reserve agents.*—Under the law the country national banks may deposit in the reserve cities, three-fifths of the 15 per cent of their de-

posits required as reserve. In the reserve cities national banks may deposit one-half of the 25 per cent required in central reserve cities.

318. *Checks and other cash items—exchanges for the clearing house.*—Under these headings are included everything which may be immediately convertible into cash. In cities where there is a clearing house the checks on the clearing house banks are listed separately.

In the statement we see that the exchanges for the clearing house are over seven times as great as the checks and other cash items. This shows the proportion of checks, etc., which can be collected inexpensively and also the proportion which must be collected by mail.

319. *Bills of other national banks.*—The national banks are not allowed to count other national bank notes as part of their reserve. It is therefore to their interest to have as few of them on hand as possible. To accomplish this they pay them out before any other form of currency, or send them to Washington to replenish the 5 per cent redemption fund or to make other payments to the Treasury.

Under the different items representing specie it will be noted that the gold and silver certificates are included.

320. *Legal tender notes.*—This represents the greenbacks held by the banks and also the Treasury notes of 1890, which are now very rare.

321. *Redemption fund.*—Every national bank is required to keep on deposit with the Treasury of the United States a fund equal to 5 per cent of its outstanding circulation. This requirement is no hardship at all to the bank because it can count this amount as part of

its reserve. It makes no difference whether the money is in its own vaults or in the vaults of the Treasury at Washington.

322. *Due from the United States Treasury.*—This item includes any amounts due from the Treasury other than the 5 per cent fund, such as notes of other national banks, or forms of currency, or bonds forwarded to it for redemption.

CHAPTER XVIII

BANK STATEMENT—LIABILITIES

323. *Capital stock paid in.*—The capital stock of a bank represents the funds paid in by the stockholders. The National Bank Act provides that no bank shall begin to do business until 50 per cent of the capital has been paid in cash, and the balance must be paid in installments of at least 10 per cent per month.

The capital is the margin paid up by the stockholders to protect the creditors in case of any shrinkage in the resources. The law requires no stated percentage of capital proportionate to the size of the bank, but aims to prevent under-capitalization by the following section:

> Sec. 5138 as amended by act of March 14, 1900). No association shall be organized with a less capital than $100,000, except that banks with a capital of not less than $50,000 may, with the sanction of the Secretary of the Treasury be organized in any place the population of which does not exceed three thousand inhabitants. No association shall be organized in a city the population of which exceeds fifty thousand persons with a capital of less than $200,000.[1]

By this requirement of a certain maximum capital for banks in towns of more than a certain population the act prohibits the establishment of banks with insufficient capital in cities where the loans and deposits are likely to be large. Until 1900 the minimum capital for a national bank was $50,000; since that time it has been $25,000 to encourage the establishment of national banks in small towns where hitherto the amount of business was too small to justify the organization of a bank with larger capitalization.

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[1] National Bank Act, p. 7.

Sec. 5139. The capital stock of each association shall be divided into shares of $100 each, and be deemed personal property, and transferable on the books of the association in such manner as may be prescribed in the by-laws or articles of association. Every person becoming a shareholder by such transfer shall, in proportion to his shares, succeed to all the rights and liabilities of the prior holder of such shares.[1]

324. *Double liability of stockholders.*—The shares of stock in a bank differ from stock in other corporations in the double liability feature. The principle of limited liability is an almost universal feature of corporation laws in this country and the stockholders cannot be made liable for further payments for the stock if it has been fully paid. The idea of limited liability is of course to make it possible for persons who are unwilling to take unlimited risk in becoming partners in an enterprise to become stockholders with a maximum risk of losing only what they have paid in. In the case of banks, however, it has become a fixed custom not only in the national bank act but also in most of the state statutes to place a double liability on the shareholders for the better protection of depositors; the reason being that the depositors are creditors of an entirely different sort from the creditors of other corporations.

Sec. 5151. The shareholders of every national banking association shall be held individually responsible equally and ratably, and not for one another, for all contracts, debts, and engage-

[1] National Bank Act.

ments of such association to the extent of the amount of their stock therein, at the par value thereof, in addition to the amount invested in such shares, except that shareholders of any banking association now existing under state laws having not less than $5,000,000 of capital actually paid in and a surplus of 20 per centum on hand, both to be determined by the Comptroller of the Currency, shall be liable only to the amount invested in their shares; and such surplus of 20 per centum shall be kept undiminished, and be in addition to the surplus provided for in this title; and if at any time there is a deficiency in such surplus of 20 per centum such association shall not pay any dividends to its shareholders until the deficiency is made good; and in case of such deficiency the Comptroller of the Currency may compel the association to close its business and wind up its affairs under the provisions of chapter four of this title.[1]

The whole purpose of requiring a certain capital sum to be contributed by the shareholders can be defeated by the subsequent withdrawal of its funds as loans to shareholders. It has frequently happened that banks have been started with capital borrowed by the incorporators, which borrowings have been repaid just as soon as the bank was in position to make loans to the shareholders.

In the statement it will be noticed that the capital stock of all the national banks amounts to a little less than one billion dollars, or a little more than one-fifth of the deposits. This means that there must be a shrinkage of 20 per cent in the assets of the banks before the depositors are in any danger.

325. *Surplus fund.*—This item signifies that a certain portion of the resources in addition to the capital paid in belongs to the stockholders. The surplus is created either by cash paid in at the organization of

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[1] National Bank Act.

the bank in addition to the capital paid, for which no stock is issued, or it represents profits which have accumulated and which have not been paid out in dividends.

The idea of the surplus fund is to provide an item in the liabilities which can be used to represent changes in the equity of the stockholders in the reserves without altering the capital stock. If the bank should suffer a loss of resources in any manner beyond the amount of undivided profits, the capital of the bank would be impaired if it were not for the surplus.

A surplus is required by law under the following section:

> Sec. 5199. The directors of any association may semi-annually declare a dividend of so much of the net profits of the association as they shall judge expedient; but each association shall, before the declaration of a dividend, carry one-tenth part of its net profits of the preceding half year to its surplus fund until the same shall amount to 20 per centum of its capital stock.[1]

A liberal surplus enhances the credit of the bank and for that reason new banks frequently start with a surplus of 50 or 100 per cent of the capital subscribed. This proves an advantage in several ways. The banks are required to purchase fewer bonds than they would if the whole investment had been put into the capital. In states where the shares of the bank are taxed on their par value it reduces the personal property tax of the holders thereof.

On the other hand the smaller amount of capitalization reduces the power of the bank to issue circulating notes and until the recent amendment to the law forbidding the banks to loan more than 10 per cent of their capital and surplus the banks were restricted to 10 per cent of their capital alone.

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[1] National Bank Act, p 28.

The fact that the shares of stock represent the equity of the holders not only in the capital but also in the surplus gives the par value of bank stock much less meaning than the "book value." The book value of the bank stock represents the $100 par value plus the proportionate share of the surplus.

326. *Undivided profits.*—Unlike the majority of manufacturing businesses the profits of a bank are carried to the profit and loss account as they accrue each day. From the gross profits must be deducted all the expenses of doing the business. At the end of the fiscal year the directors meet and declare dividends from this item, the effect of which is to transfer a part of it to the account of dividends unpaid and the balance to the surplus. Sometimes the dividends when payable are placed directly to the accounts of the shareholders when they happen to be depositors as well.

327.—*National bank notes outstanding.*—This item represents the amount of notes for which the bank is still liable. All the notes which the comptroller has forwarded to the bank are charged against it until he has received the notes back again or in their place has received lawful money for their redemption. If the bank has any of these notes on hand they will be deducted from this account.

It will be noted that the amount of national bank notes outstanding almost equals the amount of United States bonds deposited in the Treasury to secure circulation. At the particular time this report was made the banks were putting out as much circulation as possible on their bond deposits on account of the very high rate of interest at which they could loan the funds.

The amount of bonds to secure circulation is considerably over one-half the capital stock of the combined banks, showing that the banks are disposed to hold more bonds than they are required to under the law.

328. *State bank notes outstanding.*—This small item, which amounts to only $30,000, is a vestige of the Civil War period. Many of the state banks of that time were converted into national banks. The circulation which they had outstanding at that time could not be called in and $30,000 of it has never been presented for redemption.

The items due other national banks, state banks, trust companies, and approved reserve agents represent the deposits made by other banks.

329. *Individual deposits.*—This item represents the amount due to individuals and corporations. The amount signifies the obligations of the bank which may be demanded at any time during banking hours. This obligation is created either by the deposit of money or cash items which appear in the opposite column under these headings, or by the loans which the bank has granted to customers, and corresponds to the item "Loans and Discounts" on the resource side. The peculiar nature of this item was explained in the preceding chapter.

On the books of the bank the individual deposits appear under several accounts. By far the largest amount is recorded in the individual ledgers and is subject to check. For some of the deposits the banks have issued certificates of deposit either payable on demand or at a certain date. These deposits are not subject to check and are usually payable only upon the return of the certificate which is negotiable. These deposits closely resemble savings deposits except that they represent a deposit made at one time instead of in installments. The certificate of the bank is sometimes given by the bank instead of a note, where funds have been borrowed.

330. *United States deposits and deposits of United States disbursing officers.*—The Government deposits secured by bonds are divided into two classes. The first is more permanent in character and consists of funds owned by the Government in excess of the disbursements required. The second class signifies deposits which have been made by officers of the Government temporarily but which will soon be required to make payments to Government creditors.

331. *Bonds borrowed.*—There is no requirement in the National Bank Act that the bonds deposited by the banks to secure circulation or deposits shall be owned outright by the bank. Some banks find it profitable to borrow from investors or other financial institutions the bonds required for the purposes mentioned. So long as the borrowing bank is solvent and the interest on the bonds is paid regularly to the real owners, the latter suffer no disadvantage whatever from having the bonds out of their possession.

332. *Notes and bills rediscounted.*—This item, so insignificant in amount, suggests the great difference between American and European banking. In this country it is considered a confession of financial weakness if a bank seeks to rediscount any of the paper held by it. In Europe, on the contrary, a large proportion of the paper purchased or discounted by the bank is acquired with the expectation of rediscounting it. This is a great advantage because it places any bank in a position of being able to loan to any amount, knowing that it can always replace the funds by redis-

counting the notes. In the United States, however, when any bank has reached the limit of its loaning power, it is obliged to refuse accommodation to its customers, no matter how pressing their need or how distressing the consequences of denying them the funds. The practice of rediscounting practically amounts to making available for the whole community the credit of the local bank in the larger money markets. The failure of American bankers to adopt the practice of rediscounting with all its advantages both to themselves and the community, particularly to the community, is much more inexplicable because the disadvantages of the system appear to be insignificant compared to its advantages.

333. *Bills payable.*—This item, which is more than three times as large as the preceding one, signifies that the banks have borrowed outright the sum represented instead of selling some of their resources.

334. *Certified check.*—This is an ordinary check drawn by a depositor which has been certified by the cashier or other appropriate officer and which has not yet been presented for payment. When the bank certifies a check the amount is taken from the account of the depositor and placed in the certified check account. By this act it becomes a direct obligation of the bank the same as a promissory note. If the bank should fail before it is presented for payment the holder would have no recourse upon the original drawer of the check. The fact that the holder chose to have it certified instead of demanding payment at the bank throws the risk of non-payment upon him. If the maker of the check himself had it certified his liability for payment is the same as in the case of an ordinary check.

335. *Cashier's checks outstanding.*—This item repre-

sents the checks which the cashier has signed on behalf of the bank against deposits in other banks or checks upon the bank itself. New York exchange is the name given to cashier's checks which are payable at New York banks and which are sold by banks throughout the country to persons wishing to make remittances.

CHAPTER XIX

ORGANIZATION AND BUSINESS OF THE BANK

336. *National banks.*—Five different kinds of institutions in this country are included in the general term bank: National banks, state banks, trust companies, private banks, and savings banks.

National banks are corporations which are chartered by the Federal Government to assist the United States Treasury in providing the paper currency of the country. The strict limitations imposed upon these banks by law, especially the law which prohibits them from loaning on real estate security, is offset by the credit which their national charter and supervision by the examiners gives them in the community.

337. *State banks.*—State banks are chartered by the several states. The legal restrictions thrown around them vary widely but in general the state statutes are modeled after the National Bank Act. The differences between national banks and state banks so far as the functions they perform are concerned, are so unimportant that it is not worth while to discuss them separately; therefore what follows will refer primarily to national banks. Since the Civil War state banks have been allowed to issue paper currency only upon payment of a 10 per cent per annum tax, which is so high as to be absolutely prohibitive and in consequence the state banks issue no paper currency.

338. *Private banks.*—Private banks are partnerships in which each of the partners is liable for all the debts

of the firm to the extent of his private fortune. The only private banks of any considerable size are those dealing in foreign exchange, in bonds, or in real estate. An important function of private bankers is the promotion of new corporations and underwriting for new issues of securities. The firm of J. P. Morgan and Company is typical of this class.

339. *Underwriting.*—When a new issue of securities is to be brought out an arrangement is usually made with professional financiers who understand how to make a market for them. As the officers of the corporation issuing them are usually not qualified to market a very large issue a specialist in that line is in demand. The underwriter agrees to sell the entire issue at a certain fixed price; sometimes he gets a commission but more often he relies for his profit on selling the securities above the agreed price. If an issue is larger than his own firm can handle he may organize a syndicate, with himself as syndicate manager. He then invites other capitalists or firms to subscribe to the syndicate. If the market conditions are good the whole issue can be disposed of without calling upon the subscribers to furnish any funds. It is usual in the case of the subscribers that they know nothing about the whole transaction from the time of their agreement to provide a certain sum if necessary until they receive a check representing their share of the profits. If the issue should fail to find a market it may be necessary to call upon the subscribers to make up the loss, or at least to give them the privilege of taking up their share of the unsold securities at the syndicate price. The very large proportion of "undigested securities" which so troubled the financial world in 1903 and caused the rich man's panic of that year, were securities which under-

writing syndicates had failed to sell to the public and had to carry themselves on margin at their bankers.

340. *Trust companies.*—A trust company was originally not a bank at all but a company incorporated to execute trusts in the legal sense. The large powers granted to these corporations were, sometimes "inadvertently," found to include the powers necessary to do a banking business without many of the limitations of state banks. In the last twenty years there has been an enormous growth of this type of institution, and it has become a very serious competitor of both national and state banks.

341. *Banking department.*—The trust company has two distinct departments, the bank department and the trust department, with two sets of officers. The banking department is conducted almost the same as a commercial bank, although the conditions and laws in the different localities have forced it to take on a different form to suit the circumstances. In New York City, for example, the trust companies have specialized largely in the collateral loan business.

Until recently the trust companies in New York City were not required to keep any reserve. Instead of placing money in their own vaults, therefore, they either deposited in national banks, receiving thereon a small rate of interest, or loaned it for stock exchange purposes at call loan rates. These loans could be converted into cash at such short notice under ordinary circumstances that the trust companies felt it unnecessary to keep any other reserve. When the volume of this business reached enormous proportions the national and state banks felt that they were forced to have on hand ready money sufficient to provide for any sudden demands, not only at their own counters but at the counters of all the trust companies as well. They feared that in time of general panic the small percentage of cash relative to the demand deposits of both banks and trust companies would precipitate a disaster. At this time the trust companies were members of the clearing house and in order to force the trust companies to keep reserves they passed a rule requiring all members to keep in cash 25 per cent of their deposits. The trust companies were unwilling to comply with this provision and withdrew from the clearing house, nor have they ever returned to it, preferring to make their collections on city checks in the more cumbersome manner. Recently the state of New York has passed a law requiring the trust companies to keep a reserve of 15 per cent.

342. *Deposits of trust companies.*—In a great many localities the trust company has developed an entirely new field hitherto neglected by the banks. By advertising and other means they have attracted large numbers of personal accounts of people who had never before thought of having a bank account. These depositors are given the privilege of drawing an unlimited number of checks against their account and are usually paid interest on their daily balances of 2 per cent. While these personal accounts do not average very large, still they are so numerous that the total is considerable. However, most of them are fairly inactive, and the number of checks required to be handled is not excessive. With the improved methods of bookkeeping and the use of adding machines, etc., the trust companies have found that it is profitable to cater to this class of customers.

343. *Trust department.*—The trust department of the trust company has no banking function whatever, and the great number of trust companies do not pretend

to do this sort of business at all. The importance of this business, however, in modern finance warrants a brief description.

344. *Individual trusts.*—A trust department of any size will be divided into two parts, an individual and a corporate trust department, each in charge of a trust officer. The function of the individual trust department is to act as trustee for the property of individuals, as guardian for minors and incompetents, as conservator of estates, as executor of wills and administrator of the estates of intestates. A great deal of this business comes to the trust company by appointment of the courts. The duties of the trust company require it to manage large amounts of property in the form of real estate and securities. Hence it is necessary for them to have a real estate and bond department. The bond department of many trust companies has grown beyond the requirements of trusteeship into a regular bond house for the general purchase and sale of securities.

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345. *Corporate trusts.*—The corporate department acts as trustee under corporate mortgages and trust deeds. When a corporation wishes to issue bonds under a single mortgage it is impossible for each one of the shareholders to have a separate mortgage. The trust company holds the mortgage subject to the terms prescribed in the bond, and in case of default of principal or interest on the bond it proceeds against the corporation in the interests of all the bond holders. It also acts as fiscal agent for corporations, taking charge of the payments of coupons when they are due and receiving and holding sinking funds to provide for the retirement of the obligations at maturity. When an issue of bonds is subject to redemption the trust company may take charge of the drawing of the numbers and

the payment of the call bonds. The trust company may act as registrar for corporations, authenticating the issues of stocks and bonds in order to prevent an over-issue. It frequently acts as transfer agent for corporations if it is located in a central city. In the case of failures a trust company sometimes acts as receiver under the direction of the court. All these functions are of modern development but so necessary have they become that it would be almost impossible to dispense with them.

346. *Savings banks.*—A savings bank is really not a bank at all, if the word is restricted in its use to institutions which provide a medium of exchange. A savings bank is more closely related to the investment company. Its purpose is simply to receive funds in small amounts for investment in securities or real estate. The deposits are not subject to check and the bank may even require thirty days' notice before making payment. Consequently the savings bank is under no necessity for keeping a reserve. On the other hand, the savings bank has no credit which it can loan and receive an income upon. The business of the savings bank is simplicity itself. It simply gathers together small sums which of themselves are too small for investment and purchases with them interest-yielding securities or mortgages. They usually pay interest of 3 per cent or more to depositors, while the income from the investments is usually below 5 per cent. In some states, like Massachusetts and New York, where the laws restrict very closely the securities in which the savings may be invested, thus forcing the savings bank to buy only first class securities, the margin is frequently less than 1 per cent. The expenses of the business, however, are so small that even a 1 per cent margin is profitable.

347. *The organization of a bank.*—The usual method of organizing a bank is first to get a subscription of the necessary capital. Recently companies have been formed for the purpose of opening new banks in communities where the recent growth of business has justified their establishment. These companies, when they have found a locality which promises to develop sufficient business to be profitable, provide the capital and the officers. When the bank is once started and the people of the community interested as depositors and patrons, then the organizing company sells the stock to local capitalists and employs the capital in establishing new banks elsewhere.

348. *Evolution of the bank.*—In communities of slower growth, however, the bank is usually an evolution. First the local merchant or wealthy farmer with idle capital makes loans to his neighbors and friends. As the original capital grows the merchant or farmer may find that the loaning business with all its details is becoming more important than his regular occupation. People have learned to trust these men in their regular lines of business and intrust to them for safe keeping their savings or valuables. They are also asked to take charge of estates and are consulted with reference to investments, etc. In the course of time these men find it necessary to have separate offices arranged for the convenient transaction of this financial business and perhaps to have assistance in their bookkeeping. This may gradually develop into the private bank, or the size of the business may make it advisable to take other men into the business.

349. *Stockholders.*—In an incorporated bank the stockholders are the ultimate authority. Their power, however, is all delegated to a number of directors. Once

a year the shareholders of the bank have the right to choose directors, after which they are entirely powerless, except in cases of fraud on the part of the directors, until time for a new election arrives.

350. *Directors.*—It is upon the directors that the whole responsibility of the bank falls. The National Bank Act makes certain requirements of directors which are set forth in the following sections:

Sec. 5145. The affairs of each association shall be managed by not less than five directors, who shall be elected by the shareholders at a meeting to be held at any time before the association is authorized by the Comptroller of the Currency to commence the business of banking, and afterward at meetings to be held on such day in January of each year as is specified therefor in the articles of association. The directors shall hold office for one year, and until their successors are elected and have qualified.

Sec. 5146. Every director must, during his whole term of service, be a citizen of the United States, and at least three-fourths of the directors must have resided in the state, territory or district in which the association is located for at least one year immediately preceding their election, and must be residents therein during their continuance in office. Every director must own, in his own right, at least ten shares of the capital stock of the association of which he is a director, unless the capital of the bank shall not exceed $25,000, in which case he must own in his own right at least five shares of such capital stock. Any director who ceases to be the owner of the required number of shares of the stock, or who becomes in any other manner disqualified, shall thereby vacate his place.

Sec. 5147. Each director, when appointed or elected, shall take an oath that he will, so far as the duty devolves on him, diligently and honestly administer the affairs of such association, and will not knowingly violate, or willingly permit to be violated, any of the provisions of this title, and that he is the owner in good faith, and in his own right, of the number of shares of stock required by this title, subscribed by him, or standing in his name on the books of this association, and that the same is not hypothecated or in any way pledged as security for any loan or debt. Such oath, subscribed by the director making it, and certified by the officer before whom it is taken, shall be immediately transmitted to the Comptroller of the Currency, and shall be filed and preserved in his office.

Sec. 5239. And in cases of such violation every director who participated in or assented to the same shall be held liable in his personal and individual capacity for all damages which the association, its shareholders, or any other person shall have sustained in consequence of such violation.

Sec. 5239. If the directors of any national banking association shall knowingly violate, or knowingly permit any of the officers, agents, or servants of the association to violate, any of the provisions of this title, all the rights, privileges, and franchises of the association shall be thereby forfeited. Such violation shall, however, be determined and adjudged by a proper circuit, district, or territorial court of the United States, in a suit brought for that purpose by the Comptroller of the Currency, in his own name, before the association shall be declared dissolved.

In recent years the responsibility of the directors of banks has become an important question. With the increase in the size and the complexity of the business of a bank it has become more difficult to get business men to serve on the directory who are willing to consent to contribute enough of their time to get fully and thoroughly familiar with the business of the bank. It has never been customary to pay salaries to directors and the small fee of $5 to $20 per meeting is not sufficient to justify busy men in giving up much of their time.

351. *Considerations governing choice of directors.*—The credit of the bank and its attractiveness to depos-

itors depend in no small measure upon the reputation of the men on the board of directors, and hence it has become the custom to select men for that position whose names are likely to prove a business asset, not only among the business men of their particular line but with the general public. In most cases these men are not familiar even with the rudiments of banking and in many cases rarely attend the meetings of the board. Under these circumstances it has been comparatively easy for dishonest officials to use the funds of the bank in their own private interests and this has often resulted in the ruin of the bank. In an address before the Pennsylvania Bankers' Association in Philadelphia in 1906, Mr. William B. Ridgely, at that time Comptroller of the Currency, made the following radical statement:

> Except from very rare and exceptional causes, such as sudden panics or runs due to false rumors, there is never any reasonable excuse for the failure of bank or trust company. It is almost always the result of inexcusable folly and incompetence or dishonesty and fraud, and often due to all these combined. *When a bank does fail, it is the fault of the board of directors.* Many others may be to blame, perhaps more than the directors, but the final responsibility of bank management rests upon the directors and they are to blame.

In many cases the federal courts have declared that a director's duty is not discharged by merely electing officers of good reputation, ability and integrity to manage a bank and then leaving its business in their hands. The board of directors, the courts have held, is bound to maintain a supervision of the affairs of its association, and to have a general knowledge of the character of its business and the manner in which it is conducted, and to know at least upon what security its larger lines of credit are given.

352. *Briggs v. Spaulding.*—The United States Supreme Court decision most in point is the case of Briggs v. Spaulding, which was a suit brought by the receiver of the First National Bank of Buffalo against the defendants as directors for failure to perform faithfully and diligently the duties of their offices. It was alleged that they had failed to call and hold meetings, to appoint any committee of examination, to require bonds, or to make personal examination into the conduct and management of the affairs of the bank, but that instead they allowed the executive officers to manage it without supervision. In rendering its decision the court said:

> Without reviewing the various decisions on the subject, we hold that directors must exercise ordinary care and prudence in the administration of the affairs of the bank, and that this includes something more than officiating as figureheads. They are entitled under the law to commit the banking business, as defined, to their duly authorized officers, but this does not absolve them from the duty of reasonable supervision, nor ought they to be permitted to be shielded from liability because of want of knowledge of wrongdoing, if that ignorance is the result of gross inattention.[1]

The law requires more of directors than a reasonable care in selecting the officers of the bank. Although there has been great difficulty in charging the directors with civil liability for ignorance in cases where banks have failed, yet the federal courts have laid down certain principles with which every director should be familiar. Referring to the case of Briggs v. Spaulding, the court in another case said:

> In my opinion it does not meet the requirements of this statement of the law that directors may confide the management of

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[1] Briggs v. Spaulding, 141 U. S. 132.

> the operations of the bank to a trusted official, and then repose upon their confidence in his right conduct without making examinations themselves, or relying upon his answers to general questions put to him with regard to the status of the affairs of the bank. The idea is not to be tolerated that they serve as merely gilded ornaments of the institution, to enhance its attractiveness, or that their reputations should be used as a lure to customers. . . . It is inconsistent with the purposes and policy of the Banking Act that its vital interests should be committed to one man, without oversight and control.[2]

353. *Ignorance no excuse.*—Directors may not excuse themselves from liability on the plea of ignorance. Although it is a physical impossibility for directors to have personal knowledge of the condition of the books and funds of a very large bank, yet it is possible and even imperative for them to employ public accountants to make audits of the affairs of the bank independent of the federal or state examinations.

354. *Supplementary examinations necessary.*—The fact that the National Bank Act requires a frequent examination of the bank by regularly appointed examiners is not sufficient. These examinations are necessarily incomplete because of the limitations placed upon the examiner. Under the older methods of doing the banking business no loan was granted until the directors had specifically authorized it. Applications for loans were recorded in an offering book which was placed before the board at every meeting, and no loans were granted until the formal consent was given. This method is too slow and cumbersome in these days and it is doubtful whether any number of directors would have sufficient credit information to intelligently authorize every loan. However, it is not too much to demand of a board of

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[2] Gibbons v. Anderson, 80 Fed. Rep. 345.

directors that they be familiar with every loan which may become dangerous to the bank. Experience has shown that large losses have occurred only where the directors have allowed the law to be violated by loaning more than 10 per cent of the capital to one person or corporation. Furthermore, every loan made to a director or officer of the bank should be carefully considered in the board meetings. If every director were familiar with these two types of loans and exercised his best judgment in passing upon them there would be few losses from these sources. Moreover, it would be impossible to deceive the directors regarding such loans because an independent auditor instructed to report specially upon this point could not fail to discover any irregularities.

355. *Opinion of Comptroller Ridgely.*—On this point Mr. Ridgely speaks as follows:

> Above all, the directors of a bank should most closely scrutinize the loans to officers and other directors, and see that they are kept down to not only legal but safe amounts.
>
> Far the most frequent cause of bank troubles, in fact, the almost invariable cause of bank failures, is the granting of credits far beyond the legal and prudent limits to the officers or to one concern or group of allied concerns, generally owned and managed by the officers or directors of the bank, or in which they have directly or indirectly, some large pecuniary interest.
>
> When a bank is in anything approaching this condition, it is in grave danger, for its entire safety depends on the success of outside enterprises, and the man who should protect the bank has, perhaps, a greater interest in protecting the other concern. It is probably the most common, serious dereliction of duty on the part of directors to allow such a condition as this to gradually obtain in a bank. It may sometimes be done honestly as the result of bad judgment only, but in my experience it is the most frequent cause of dishonesty and fraud among bank

officers. I do not remember a case where a bank officer had the moral courage to let loans of this kind carry down his bank without resorting to crimes of some kind to conceal or postpone the catastrophe, in hopes that some fortunate circumstance might intervene to save him and conceal his fraud.

The function of the board of directors is to assume the responsibility for the safety of the bank and to determine the general policies which shall be pursued. With the active conduct of the business it has nothing to do. This function is delegated to the officers, the chief of whom is the president.

356. *The president.*—The president is always the presiding officer of the board of directors. It devolves upon him to see that the directions of the board are carried out. In some cases, especially where there is a dummy board of directors, the president exercises the whole power. In other cases he simply carries out the will of the board in the administrative details without having even the authority to grant a loan. Usually the powers and duties of the president lie somewhere between these two extremes. The board as a rule determines the maximum limits to which credit may be extended to particular firms, and leaves the president wide discretion in granting credits between these limits.

In large banks there are vice-presidents who share with the president the duty of negotiating with borrowers.

357. *The cashier.*—The cashier of the bank is its chief executive officer, upon whom falls the duty of operating the bank. He has direct charge of all the employés and must of course be familiar with the details of every department. He usually acts as secretary of the board of directors. It is his duty to prepare the reports and statements. He is the officer empowered to sign docu-

ments on behalf of the bank. His signature must always appear upon the circulating notes issued or the checks and drafts drawn by the bank upon its correspondents.

In most banks which have not yet developed a special credit department the cashier is the chief credit officer. While the president or vice-president usually retains the authority to grant loans, he usually depends upon the cashier for information as to the credit responsibility of the applicant. In those banks where the list of borrowers has become extended and where the advantage of a credit bureau is recognized, the cashier frequently has an assistant who has specialized in this field and who understands how to accumulate and systematize information affecting the financial status of the patrons of the bank.

The credit department of a bank probably offers more opportunity for an employé to acquaint himself with the science of banking in general than any other department. The business of a bank is of such a routine character that the employés have very little opportunity to learn the business from the inside, or to display initiative, or to perform duties requiring discretion. Unlike most businesses there is no line of positions which require successively more and more business sagacity on the part of the occupant. The gulf between the highest employé and the officer is a wide one and very difficult to cross; in most large city banks it is practically impossible to cross, and the officers are usually recruited from small institutions where the employé has had an opportunity to learn all departments of the bank.

358. *Paying teller.*—The highest employé of the bank is the paying teller. He has charge of all the outgoing funds of the bank. The transactions which

require the paying out of cash are: (1) Cashing of checks presented at the bank; (2) payment of debit balances to the clearing house; (3) shipment of currency to correspondent banks. It is the duty of the paying teller to see that all the cash of the bank is properly accounted for. It is necessary that he be familiar with the signatures of all the depositors so that he may make no payments without having proper vouchers to show for them. Banks are under legal responsibility to depositors to pay out no funds on their account except to the proper payees or their order. Even if the signature on the check is genuine, still the person demanding payment may not have proper title to the check or he may have altered it. It is, therefore, the duty of the teller to safeguard the bank by requiring proper endorsement before the check is paid, so that in case the depositor attempts to repudiate the check the bank can call upon the payee for reimbursement.

359. *Receiving teller.*—The employé second in importance is the receiving teller. Unless there is a note clerk in the bank it is the duty of the receiving teller to take in and account for all the funds which come into the bank. His chief duty is to receive cash, checks, drafts, and other items, and to give credit to depositors for the same. His principal duty is to assure himself that every item for which credit is given is collectible. Funds come into the bank from (1) depositors, (2) credit balances at the clearing house, (3) payments on maturing paper held by the bank either as an asset or for collection, and (4) currency shipped by correspondent banks or by the Treasury of the United States.

360. *Note teller.*—Where the business of a bank is extensive enough to require it, there is a note teller whose function it is to make all the collections. Matur-

ing notes payable at the bank are in his charge. He receives all cash remittances from out-of-town customers. He has direct charge of all the collections of drafts, etc., in the city, except the checks on clearing house banks, which are usually attended to by the clearing house clerk.

361. *Discount clerk.*—The discount clerk has charge of all the loans and discounts of the bank after they have been negotiated by the officers. It is his duty to keep the documents so systematically that there will be proper presentation made of them when they mature. When due the interest is calculated and the note turned over to the note teller for collection. He has charge of all the collateral held to secure loans unless the business is so large as to require a collateral loan clerk. In banks having close relations with stock brokers the latter position may be a very responsible one. The collaterals held to secure loans to stock brokers are constantly being withdrawn, substituted and replaced. Furthermore, in times of active speculation, the values of the collaterals are shifting so rapidly that the collateral loan clerk has great responsibility in seeing that the margin of security demanded by the bank is maintained and the call for additional collateral is properly sent out, so that the borrower can have no grounds of complaint if the bank finds it necessary to sell the collateral to protect itself in a panicky market.

362. *Bookkeeping department.*—The transactions of all the tellers and other clerks are finally referred to the bookkeeping department. There is always a general ledger of the bank containing the accounts summarized in the bank statement. It is the duty of the general bookkeeper to make up a daily statement showing the condition of the bank and all statements required by the

comptroller of the currency. The bulk of the bookkeeping work falls upon the individual ledger keepers, whose duty it is to charge to the depositors' accounts every check drawn by the latter and to credit their accounts with all the deposits reported by the receiving teller. The bookkeeper must keep the paying teller informed as to the balances of depositors.

In many banks there is a separate department for handling correspondence and the collection of out-of-town items. It has become the custom of late years for remittances to be made in checks on local banks rather than in New York exchange or money orders as formerly. In some cities the banks are so anxious to secure the deposit accounts of large firms that they make no charge for the collection of local checks, although this may require correspondence with a multitude of banks in all parts of the United States.

363. *Laws relating to collections.*—Every deposit in a bank other than cash must be collected. If the item is a check on the bank itself or a matured note payable at the bank, it is paid as soon as the bank gives credit to the depositor. But if the items are payable by another party the bank is usually considered, in the absence of a special agreement and when the items are endorsed in blank or in full, to be the bailee of the depositor. The deposit is in fact a special deposit until the proceeds of the collection are lodged in the bank and credited to the depositor, whereupon the relation between bank and depositor changes to that of debtor and creditor.

As bailee, the bank has all the rights to the paper held and may sue upon it. In the event of its non-collection the bank may rescind the credit already given the depositor, thus proving that the bank had not purchased the paper and taken title.

Insolvency of a bank revokes its power to collect and it must hold uncollected paper as a special deposit of the owner. If it receives proceeds of a collection and mingles them with the general funds of the bank it is guilty of fraud.

A collecting bank should accept nothing but money in payment but it has been held innocent of negligence when it had taken a certified or even an uncertified check which it presented to the drawee bank without delay and the taking of which caused no loss to the owner of the collection item by reason of release of endorsers, etc. Upon non-payment of the check taken in payment of the collection item the bank should recover the item if possible the same day and protest it. Payment by worthless check is no payment and the bank could protest the item even if the payor refused to give it up.

If a collection item is endorsed "For collection and remittance," the proceeds become a part of the general funds of the bank as soon as a draft is remitted, and if the draft proves worthless the owner of the collection cannot claim the funds as a special trust deposit.

If the bank has collected a check bearing a forged endorsement, the proceeds belong to the rightful owner and may be collected by him although the bank has turned over the proceeds to the person depositing the item.

A New York bank received a "tramp" collection (one remitted by a stranger with whom it had no account), collected it, deducted its collection fee, and remitted. Later it turned out that the check had been lost in the mail after being endorsed in full; the thief forged the endorsement and sold it to an innocent party who sent it to the New York bank for collecting. The true owner recovered from the bank, which was unable to locate the person to whom it had paid the proceeds.

But a drawee bank cannot collect the proceeds of a raised check from a collecting bank if they have been paid over by it to the owner of the item.

364. *Liability of collecting bank.*—When a bank undertakes to collect, it makes itself liable for all losses caused by its negligence, but it is not responsible for the negligence of a notary selected by it with ordinary care because the notary is a public officer.

The law varies in the different states as to the liability of a collecting bank for banks to whom it sends the item in course of collection. In the federal courts, and in Pennsylvania, New York, New Jersey, Ohio, Indiana, Michigan, Montana, and Minnesota, it is held that a collecting bank is *bailee* and liable for the agents it selects to make the collection. In the other states, the bank is held to be the *agent* and renders itself liable for sub-agents appointed by it only to the extent of using due care in selecting them; beyond this the sub-agents are responsible to the owner and may be sued by him. It is held to be negligence for a collecting bank to remit the item directly to the drawee bank, since that bank may have an adverse interest.

Banks do not succeed in avoiding responsibility by printing in the pass books notices that they will not be liable for the acts of banks to whom they send items. Such contracts have been held to be void by the courts on the same principle that railroads cannot avoid liability for accidents to persons riding on passes even though the pass bears on its face such a disclaimer.

If a note is payable at a bank and funds are kept to pay it, the bank is the agent of the maker and if the bank fails before the holder of the note gets possession of the funds, the maker is liable to have to pay the note again.

If a bank collects a check and the drawee bank discovers that it has paid by mistake, there being no funds, the collecting bank is safe in returning the payment and receiving back the check. The endorsers are not released even though the maker of the check is insolvent.

The cashier of a bank received a note for collection. The maker appeared and said he had made arrangements for its renewal. The cashier, however, insisted on cash payment, which was made. Next morning he received instructions to return the note. He sent the proceeds instead. He would not have been justified in repaying the sum to the maker, receiving back the note and forwarding it.

365. *Collection of out-of-town checks.*—The collection of out-of-town items is perhaps one of the heaviest expenses of a bank. It has been calculated that the cost of collecting an item averages about eighteen cents divided as follows: Exchange .045 cents, postage and clerical labor .048, interest on money during the period of collection .085. Small banks shift the expense onto the larger banks by keeping accounts with them and depositing all collection items. Large city banks require such depositors to keep balances which they calculate are large enough to yield a profit over and above the expense of making the collections.

The economics which would result obviously from a system of collecting country checks in some such manner as city checks are now collected through the clearing houses, has led to many schemes being proposed but none has as yet been adopted.

It was proposed in Boston that one bank do all the collecting for the city, thus avoiding a large amount of duplication of work and holding the country banks to stricter terms than competing city banks could do individuals. This was the Suffolk bank system applied to check collections. The scheme failed because none of the banks were willing to give any one bank the advantage which such a position would bring, nor to give any one bank the opportunity to learn so much about its affairs as the collection of its items would give it.

To avoid these difficulties it was proposed to charter a new national bank for the purpose, but the law forbids national banks to hold stock in other banks.

Schemes for dividing the country up into districts with a clearing house for each district are impracticable because settlements could not be made on the same day and it would be necessary for each member to keep funds on deposit in the clearing city to pay balances against them. Furthermore, the pro rata expense would be considerable whereas now the country banks pay nothing for getting their collections made while they get fees for collecting items on other banks in their vicinity or even on themselves.

366. *English method of country collections.*—Each bank in London receives during the day a large number of checks upon country bankers. Upon these checks the name of the London agent is printed. Every clearing banker in London is the agent for one or more country banks. So when the country clerks of each bank get such checks from the cashiers, correspondence department and other sources, they proceed to arrange them for clearing as they do town checks, sorting them and putting them in packages according to the London agencies at which they are payable. No credit is given in the clearing house for these country checks on the day

on which they are delivered. The amounts are simply settled by the delivering clerks and the receiving clerks, and then the items are taken to the respective banks, whence they are sent by mail the same evening to the country banks by whom they are payable. If these checks, reaching their destination, are found to be all right, they are credited to the account of the London agent who is advised; but if any of them are not all right, either from insufficient funds or irregular endorsement, or any other cause, such irregular checks are returned direct to the banker whose crossing they bear. All country checks not returned or advised by the morning of the third day are assumed to be paid, and credit is accordingly given for them in the clearing of that day and the amount is settled for, along with those advised paid, in the final balance. All country checks held by London bankers, returned unpaid, must be returned into the hands of the clerk representing the delivering bank by 12:30 on the third day, and they are simply deducted from the total of the country checks on the day of settlement.

CHAPTER XX

DEPOSITS AND DEPOSITORS

367. *General deposits.*—Deposits are of two kinds, general and special. General deposits are always money or the right to receive money. They create between the bank and the customer the relation of debtor and creditor. The relation is peculiar in that the bank not only contracts to pay the debt on demand (unless the deposit is a time deposit) but also agrees to pay to the order of the depositor any sums within the total amount of the deposit, and if it fails to do so it may be sued in damages by the depositor. The bank may satisfy the depositor by the payment of legal tender, no matter by what form of money the debt was created or how much the legal tender may have depreciated. The legal tender acts during the Civil War period were more important to banks than any other class in the community, these acts permitting the banks to pay their depositors depreciated paper money, even though the depositor had deposited gold. At that time it was the custom among the banks to open special gold accounts all the payments on which should be made in gold.

368. *Special deposits.*—A special deposit may consist of anything of value left with the bank for safe keeping. The relation between the bank and the depositor in such a case is that of bailee and bailor. The title to the deposit does not pass to the bank as in the case of a general deposit, but rests in the depositor. The bank is held to use only ordinary care in protecting it and if it is stolen

without negligence on the part of the bank, the owner must bear the loss. The banker must return to the depositor the identical thing deposited. If the bank accepts a consideration for keeping the deposit, it is held by law to exercise greater care.

369. *Safety deposit vaults.*—Because the banker was the only business man in the smaller places, possessing a safe, it was formerly the custom for him to receive the valuables of customers for safe keeping. Nowadays the banks derive a profit from the function which was formerly a source of great annoyance to them, and they have established safety deposit vaults the boxes of which are rented by the year. These vaults are not only profitable on account of the rentals they earn but also because they act as a feeder to the bank. Many people who will not trust the bank with their money will rent a box. This brings them into touch with the officials of the bank, and as a rule whatever suspicion they had gradually disappears, so that ultimately they become regular depositors either in the savings or commercial department, especially if the bank pays interest on deposits.

370. *Inducements to depositors.*—We learned in the preceding chapter that a cash deposit enables the bank to earn credit from three to six times its amount. It is quite possible for a bank to make 15 to 20 per cent on the deposits left with it. Hence there is great competition among banks for deposit accounts which are likely to be fairly permanent. In return for the use of the general deposit which is so profitable, banks have been led by competition among themselves to offer many valuable services to the depositor. Among these are the following:

(a) *Checks.*—It pays the checks of the depositor, taking the risk of their being genuine and that the money is paid to the person designated by the depositor or his order. This service is of great value to the depositor as it saves him the inconvenience and the expense of making cash payments.

(b) *Collections.*—The bank collects the checks and all other items of credit for the depositor, often at considerable expense. It offers the depositor a cheap and easy way to collect accounts due by drawing sight drafts on his debtor and collecting them through his bank. Since the growth of the custom of sending local checks in making small payments to city houses, such for example as the one dollar subscription to magazines, the associated banks in several of the larger cities have been compelled to establish a uniform fee for collecting out-of-town checks, the rate usually being $\frac{1}{10}$ of 1 per cent, with a minimum charge of 10 cents per check.

(c) *Safety.*—The bank relieves the depositor of the risk of caring for his money.

(d) *Loans.*—The bank usually feels under obligation to loan to a depositor on more advantageous terms and usually on less rigid requirements than to non-depositors. It can do so because it is more or less acquainted with the affairs of the depositor and can accept personal credit when other parties would require collateral security. The greatest advantage, however, comes in times of panic when funds are needed most and when all the banks are refusing to loan to others than their depositors.

(e) *Interest on balances.*—Sometimes the banks pay interest on the daily balances. This practice was an innovation of the trust companies and was due to the fact that the deposits in the banking department of the earlier trust companies were practically time deposits. When the character of the deposits gradually changed the custom still prevailed, much to the vexation of the national banks.

(f) *Increases credit.*—The banking connection frequently increases the credit of the business man. A good banking reference is frequently of great advantage in business, and the banks must be constantly on their guard against persons who use their connection with the bank to gain unmerited credit.

371. *Difficulties in establishing a new bank.*—It is very difficult to establish a new bank in a community already supplied. If the old banks are not willing to accommodate their customers freely, and if they charge for making collections or refuse to loan except on onerous terms as to rate and security, a new institution may attract many depositors by superior inducements, particularly by paying interest on deposits. Too many concessions, on the other hand, may cause the new bank to lose credit for soundness; it may be inclined to take great risks in loaning in order to recover the amounts paid out as interest to depositors and in the expensive services performed for them. There usually is no difficulty in finding borrowers for the funds of the new bank; in every community there are always business men of unsound methods who have been refused credit by the old banks and who welcome the appearance of a new bank, hoping to establish relations with it. They try to place the bank under obligations by opening deposit accounts.

372. *Value of a banking connection.*—Many well established banks are enabled to hold their depositors without paying interest on deposits against the competition of the trust companies because they offer the depositor something of more value to him than the interest,

namely, credit in time of need. When a panic comes and even strong business concerns are in danger of bankruptcy through temporary need of funds, the opportunity of the bank to render service is very great. A small loan at the proper time may count for more than interest on deposits for many years. Depositors remain loyal to old conservative banks, knowing that the banks will probably have a chance, sometime, to render reciprocal service. However, as business concerns grow richer and less dependent upon bank credit for existence this inducement will lose its force.

373. *Kiteing checks and drafts.*—The practice of "kiteing" is a source of great annoyance to banks. It is practiced by depositors who wish to gain the use of funds for a short time without payment of interest. It is possible to accomplish this because of the custom of banks of giving credit immediately upon deposit for checks and drafts, even though they are drawn on distant cities. Kiteing requires the collusion of two parties located some distance apart. It can be most easily done between branches of the same concern.

374. *Method of "kiteing."*—To illustrate the practice let us assume that a depositor in New York draws a sight draft or deposits a check received from a confederate in San Francisco. The bank will permit the New York depositor to check against the credit even though the bank will not realize the proceeds of the check or draft within one or two weeks. It will require at least a week for the check or draft to reach San Francisco and be presented to the confederate for payment. Anticipating the arrival of the bill against him the confederate will provide credit at his bank by depositing there a draft or check on a third confederate, perhaps

in New Orleans. Thus two or three persons may have the use of considerable sums of money for some time without payment of interest or principal.

375. *Title to deposited checks, etc.*—The title to paper deposited in a bank often becomes an important question. It is a rule of law that if the items deposited in a bank are for collection and not for credit on the regular account, the title does not pass to the bank but remains in the depositor until the proceeds have arrived at the bank. In this case the bank is simply the agent of the owner, and the proceeds of the collection are trust funds which, if they can be traced, must be returned to the owner in spite of insolvency of the parties holding them. If the paper is endorsed "for collection" there is no doubt as to the ownership, but when it is endorsed in full or in blank the ownership depends entirely upon the agreement between the depositor and the bank. If no agreement has been made the law holds that the deposit is for credit and that the bank acquires title. If the bank should fail the depositor must take his chances with the other depositors, but if the agreement has been that the items deposited are for collection, or if they have been endorsed plainly "for collection," the depositor is a preferred creditor and is paid before all other depositors.

Unless the item is endorsed "for collection" or they have notice otherwise, innocent third parties who consider the item the property of the bank and seize it to pay any debts of the bank then having it, cannot hold to the rule longer. The law on this point was clearly laid down in the case of Doppelt v. National bank of the Republic.[1]

376. *Case of disputed ownership to deposited check.*

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[1] No. 1, National Bank Cases.

—Doppelt deposited with his bank a check endorsed in blank for collection. The bank endorsed the check "For collection to the credit of ——Bank," (inserting its own name), and sent it to the National Bank of the Republic. Doppelt's bank failed the next day owing a considerable amount to the National Bank of the Republic. The latter seized the proceeds of the check after it had been collected in order to satisfy the debt due it. Doppelt sued the National Bank of the Republic for the funds, claiming that his own bank had acquired no title to the check. Regardless of the agreement between himself and his bank, Doppelt could not recover because the National Bank of the Republic had no notice, nor could it have learned from the endorsement of Doppelt's bank, that it was not the owner of the check. The law permitted the National Bank of the Republic to regard the check as being the property of Doppelt's bank.

377. *Accepting deposits when insolvent is criminal.*—The receipt of deposits by an insolvent bank is clearly a fraud and the officers who take deposits are guilty of criminal offense, punishable by imprisonment. In convicting an officer of a bank of this charge it is necessary to prove that he knew the bank to be insolvent when he received the deposit. The insolvency of a bank is a very difficult matter to determine sometimes, because it depends upon the value of the loans and discounts in its assets. While the officers may know that some of the loans are not first class and may not be paid promptly yet they may believe them to be good ultimately.

378. *Drawer released from responsibility after reasonable time.*—The drawer of a check is always liable for the ultimate payment in case the bank should fail before it is cashed. However, in order to protect the drawer of checks, the law requires that a check must be

presented to the bank for payment within a reasonable time, otherwise the holder of the check must assume the risk of the failure of the bank.

379. *Local banks.*—In the case of a local bank the courts have held that a reasonable time means until the close of the business day following the delivery of the check. If the payee should endorse it to another party on the second day and the endorsee should hold it still another day before presenting it, the bank failing in the meantime, the original drawer would be released and the payee be compelled to reimburse the holder or endorsee, because the latter had presented it for payment within a reasonable time after receiving it. In the case of checks drawn on banks outside the city in which the drawer resides, the check must be forwarded on its way before the close of the next business day in order to hold the drawer responsible.

380. *Holder of a check can not sue bank.*—In nearly every state a bank on which a check is drawn is under no legal obligation *to the holder* to pay or accept it, whether the maker's funds are sufficient for this purpose or not. Of course if the bank has accepted the check by certification, then the holder has a claim against the bank. If a bank should decline without a valid reason to pay a check drawn on a sufficient fund belonging to its depositor the institution would be liable for whatever injury the depositor sustained. For example, should a bank decline to pay a check supposing that the maker's deposit was insufficient when in truth it was ample, the institution would be liable for the consequences of thus dishonoring his order, even though its conduct was founded on the mistaken calculation of a bookkeeper.

381. *Revocation.*—The depositor has the privilege of stopping payment on a check, and the bank will be

liable for the amount if it pays the check in spite of the stop order.

The death of a depositor works a revocation of all the checks not yet paid just as soon as the bank receives notice of his death.

382. *Insufficient funds.*—If the credit account of the depositor is insufficient to pay the full amount of the check, the bank has no right to pay a part of the sum with the funds on hand. On one occasion when a bank refused to pay a check where the funds to the credit of the depositor were insufficient, the holder of the check, fearing that if there was delay he might not receive anything on account of the embarrassment of the drawer, deposited to the account of the drawer a sum sufficient to cover the amount of the check. Thereupon the bank had no right to refuse payment.

383. *Forgeries.*—The bank is presumed to know the signatures of its depositors and it cannot pay a forged check and charge the account of the depositor with the amount of the check. The principal exception to this rule is in the case of a check so negligently drawn that an alteration is easily made. The bank that pays a forged check cannot recover the money from the innocent payee. This seems a hard rule as both are innocent, but as greater vigilance on the part of the bank might have discovered the forgery it must be held responsible.

384. *Post-dating.*—Sometimes checks are post-dated, that is, bear a later date than the one on which they are written. The object of this is to obtain delay in making payment, the drawer simply desiring time in which to have the money in the bank's possession on the date specified. The bank that pays an altered post-dated check before its due date cannot check the amount against the drawer. In no case can a check paid before

the time specified be charged to the drawer's account.

385. *Set-off.*—The relation between the bank and depositor is that of debtor and creditor; therefore either party has the right to set off his debt to the other with any claim he may have against him or it. For instance, if A has a deposit of $100 in a bank, the bank is his debtor for that sum; but if the bank holds an unsecured and matured note against A for $50 the debt of the bank to A is only $50—the difference between the credits and debits.

386. *When a depositor fails, his note not being secured.*—This point is of considerable consequence when one or another of the parties have become insolvent. If the depositor fails owing the bank on an unsecured note, whether matured or unmatured, the bank can seize the deposit to satisfy the note unless somebody has a prior lien upon it, for instance, an attachment; or in Illinois, South Carolina, Kentucky, Nebraska, or Texas when a check operates as an assignment of so much of the deposit, a check holder, after he presented the check, would have a claim superior to that of the bank. Since insolvency caused all unmatured obligations of the insolvent person to become at once due and payable, the bank could apply a deposit on such a note. If the note has security the bank must first satisfy the note from the security.

387. *Advantage to depositor.*—If the bank should fail the depositor may set off his note to the bank with his deposit. The receiver cannot, of course, enforce collection on the note until it matures but the depositor has his claim against the bank whenever the note is presented to him. The receiver cannot avoid this set-off by selling the note to an innocent third party, for the fact that the note was purchased from a receiver would

be notice of irregularity. If a note after maturity was negotiated by one bank to another and the first bank failed holding a deposit of the maker of the note, the maker could use his deposit to off-set the note, because the second bank was not a bona fide holder and took the note subject to all equities between the maker and the first bank.

388. *Set-off makes failures appear worse.*—Since a large portion of the loans of a bank are made to depositors, whenever a bank fails a considerable part of the assets are canceled by an equal amount of liabilities in the shape of deposits. Depositors who are also borrowers are really in the position of preferred creditors for their deposits and they gain at the expense of depositors who are not also borrowers. Therefore, in a bank failure where a 50 per cent dividend is paid to depositors, the failure is not so bad as this figure indicates, for a large number of depositors may also have been borrowers and have lost little or nothing.

389. *Illustration.*—A bank with $1,000,000 loans and $1,000,000 deposit liabilities fails. If half the loans are offset by deposits there remain $500,000 of loans with which to pay $500,000 deposits. Suppose the loans realize 50 per cent of their face value when liquidated, there would then be $250,000 to be distributed to depositors, or a 50 per cent dividend. If the depositors who were also borrowers had not been allowed to offset their obligations with their deposits, the assets collected would have been $750,000, which would have been distributed among all the depositors having claims of $1,000,000; that is, each depositor would have received a 75 per cent dividend. This explains why failures are not as bad as the percentage of dividends indicates.

390. *Form of note.*—Some banks use a form of note

similar to the following in which the borrower specifically agrees to permit the bank to transfer to itself in case of his insolvency any deposit credit or other form of indebtedness:

$.......... EVANSTON, ILL.,........................19..

..................after date...........promise to pay to the order of

STATE BANK OF EVANSTON,

.... DOLLARS

With interest at ...... per cent. per annum after ...... at the office of said Bank. Value received. In case of the insolvency of the undersigned any indebtedness due from the legal holder hereof to the undersigned may be appropriated and applied hereon at any time, as well before as after the maturity hereof.

No.......... ....

CHAPTER XXI

LOANS OF THE BANK

391. *Two qualities necessary to the making of a banker.*—The successful banker who has the entire responsibility of his bank upon his own shoulders must possess two qualifications almost opposite in character. Under former conditions conservatism was the distinguishing quality of a good banker but with keen competition in the business he must add to conservatism in granting loans, aggressiveness in securing deposits. In a large bank the two functions can be specialized in different men. The point of view of the official who makes the loans should be, first, to avoid losses and, second, to make money; in these good judgment is more to be desired than enterprise.

Mr. William Law, vice-president of the Central National Bank of Philadelphia, in an unpublished address, has made a fourfold classification of bank borrowers.

392. *Investment loans.*—First, investment borrowers —parties who borrow to invest the funds of the bank in certain securities or property which they wish to carry with a view of reselling at a profit, or of holding until funds can be accumulated to pay for the purchase, or of enabling the holder to gain certain control or influence, or of otherwise accomplishing some object external to the transaction. Such are the loans ordinarily granted brokers, investment bankers, and market operators. These loans can be readily realized upon in proportion to the convertibility or salability of the collateral;

that is to say, under normal conditions such a borrower will pay his loan at one bank by selling the securities pledged there or by borrowing from another bank.

393. *Conditions under which they are good banking loans.*—Loans of this character, if they are obligations of active and capable men, and especially if payable on demand and secured by well-distributed and properly margined collaterals possessing a broad market, are an excellent investment for a portion of the funds of a bank. However, when money is redundant such loans at times yield a lower rate of interest return than the rate paid by banks in reserve and central reserve cities upon the daily balances of their out-of-town correspondents. In recent years the rates upon such loans have ranged from 1½ to 2 per cent for several consecutive months. In times of great financial stringency realization upon such loans is often exceedingly difficult. The bank having loans secured by a large line of certain securities may hesitate to force their sale, fearing to break the market and thus reduce the market value of similar securities on other loans or injure the market price of securities belonging to their friends and business associates; but we are compelled to recognize the fact that under our system of a bond-secured, non-elastic currency, with its well-known central reserve city and reserve city features, call-loans upon stock exchange collateral afford a reasonably safe and exceedingly convenient method of utilizing that portion of the loanable funds of an active bank in a financial center which is not employed in caring for the requirements of its borrowing dealers.

394. *Industrial loans.*—Second, automatic or seasonal borrowers. By these terms it is intended to describe the operations of manufacturers, merchants, farmers, dro-

vers, and other like borrowers who require temporary accommodation during a period of production, transportation, distribution, or collection. To illustrate: A converter of cotton goods must pay the commission merchant or manufacturer for his raw material, for instance, gray goods, within ten days after purchase. The process of bleaching, dyeing, and finishing may consume sixty days; the process of distribution among and collection from the dry goods wholesalers who purchase the finished product will require at least sixty days more. Funds loaned a borrower of this description should be automatically returned with the completion of the transaction. Or a company operating grain elevators in Minneapolis ships wheat in carload lots to a Philadelphia grain exporter, asking its local bank to discount the bill of lading draft created by the transaction. The completion of this purchase by the sale of the sterling grain bill automatically returns to the bank the money borrowed. From the standpoint of a commercial banker loans of this character constitute the ideal bank credit. Banks are to be envied when a large part of their funds are utilized by local dealers engaged in producing, marketing, and distributing the great staples that the people consume, as food, clothing, heat, and light. A bank so located will continue its usual business whether or not there is a panic on Wall Street, whether or not the financial leaders are hurrying to Washington, whether or not there are eager buyers for life's light luxuries.

A favorite form of loans of this sort are the re-discounts of other banks, especially if the borrowing banks are located in sections where seasonal borrowing is the usual rule and are, therefore, themselves seasonal or temporary borrowers. The risk involved is small and proceeds of re-discounts are apt to remain on credit with the lending bank in much larger proportion than are the proceeds of ordinary loans. A bank usually borrows to increase its reserves; a firm usually borrows to pay out the proceeds.

The above mentioned two classes are considered most desirable loans; the two following less desirable.

395. *Capital loans.*—Third, capital borrowers. This phrase is intended to describe the borrowing of permanent capital for a business to be repaid from earnings or profits as they accumulate, and the natural results are continuous loans and over-trading. For instance: The president of a manufacturing corporation, in constructing a new plant, finds that its cost exceeds the capital subscribed by the stockholders. He borrows the necessary money by issuing notes which are discounted by a friendly bank. This loan can be extinguished only by borrowing elsewhere, by continuous operation at a profit, or by the sale of the plant.

396. *Capital should come from stock and bond issues.*—The weakness of this position would quickly be made manifest should manufacturing operations cease. All capably managed banks discourage such loans in any substantial measure unless conditions are unusually favorable for continued high earnings which can be applied to reducing steadily such a loan within a reasonable time. Capital for requirements of this character should be provided by additional subscriptions of stockholders or by sales of bond issues. That is to say, the funds should be held in the form of permanent or long term borrowing at the option of the borrower through bonds secured by mortgage.

This idea is concisely expressed by the advertisement of a prominent Chicago bank: "Conservative banking consists in caring for many interests, while capitalizing none." The statement of a strongly organized manufacturing corporation or firm indicates quickly convertible assets abundantly sufficient to protect all quick liabilities. Of course, from the standpoint of the manufacturer engaged in a highly profitable line of work, the temptation is alluring to endure for a period the sacrifices, buffetings, and annoyances of carrying what is termed a plant debt, knowing that he will thereby be enabled to maintain permanently a low capitalization and thus render the task of dividend earning lighter for all time to come when the plant debt shall once have been extinguished out of earnings.

397. *Mortgage loans.*—Fourth, long time or permanent borrowers on mortgage. To this class belong the holders of improved and productive central real estate in the larger cities. Though these loans command low rates by reason of the stable value of the security, national banks are prohibited from taking them directly, except to secure a debt previously existing, and are criticised severely for taking them indirectly. These loans are generally placed with corporations controlling trust or permanent funds, such as life and fire insurance companies, savings banks, and trust companies. The degree to which these loans are encouraged by our laws and the ease with which money can be borrowed in round amounts upon improved central real estate in our larger cities, possibly affect the advance in real estate values as directly as the increase in population and wealth. Building and loan associations afford the most effective plan for handling small real estate loans. In this classification may be included, for some reasons, the bonds constituting preferred liens upon high class railroad and traction properties. But their ready convertibility

renders them also acceptable as a bank investment, and they are favored by the national banking system in that the rule regarding excess loans is not applied to them.

398. *Loans reported to the comptroller.*—The following classification is used by the Comptroller of the Currency in the reports required of national banks. Comparison is made with the statement of ten years previous:

Class.	1897.		1903.		1907.	
	Amount in Dollars.	Per Cent.	Amount in Dollars.	Per Cent.	Amount in Dollars.	Per Cent.
On demand, paper with one or more individual or firm names.	103,837,578	5.1	374,689,245	8.7	428,221,535	9.2
On demand, secured by stocks, bonds and other personal securities ..	326,447,852	15.9	828,016,734	19.3	832,878,479	17.8
On time, paper with two or more individual or firm names.	896,099,397	43.7	1,502,034,898	35.0	1,648,751,438	35.2
On time, single name paper (one person or firm) without other security ...	317,520,501	15.5	776,125,101	18.0	899,494,658	19.2
On time, secured by stocks, bonds, and other personal securities, or on mortgages or other real estate security ...	407,104,110	19.8	818,117,338	19.0	869,237,859	18.6
Total	2,051,009,438		4,298,893,316		4,678,583,969	

399. *Demand loans have increased.*—The first class represents the demand loans of all the national banks. It will be noted that these unsecured demand loans have increased over 4 per cent in ten years.

The second class are demand loans secured by stocks and bonds as collateral. There is an increase proportionately in this form of loans between 1897 and 1906. The year 1906 was one of great speculation in the stock markets, and the increase in this item represents the growth of speculation on the margins. About one-third of these loans are reported by the New York banks alone. In 1897 these loans fell off proportionately to others, probably on account of the liquidation of the stock markets which had taken place during the summer, the margin traders having been sold out and their stocks going into the hands of holders who could purchase them outright.

400. *Double-name paper.*—The next item represents trade paper discounted at the banks. The decrease of 8 per cent in ten years indicates the changing nature of bank loans. The commercial paper placed through commercial paper houses, which are described later, is single-name paper. It is now the custom of the largest houses not to take notes from their customers but to borrow on their own credit. This tendency is more apparent in the cities than in the country as a whole. Throughout the country there has been an absolute increase in two-name paper of nearly 100 per cent, while the increase in this class of loans held by New York banks has been not more than 30 per cent.

401. *Single-name and brokers' paper.*—The amount of single-name paper held by the banks has almost doubled in ten years, indicating the growth of the commercial paper houses and the decline of discounting.

The last classification represents time loans on mortgages or other security. Since the law prohibits the national banks from loaning on mortgages the collateral back of these loans is probably to a large extent personal securities and warehouse receipts.

Below are reproduced two forms of notes in use generally by banks:

JUDGMENT NOTE

STATE BANK OF EVANSTON.

$.......... Evanston, Ill.,....................189

..........after date, for value received, ... promise to pay to the order of the STATE BANK OF EVANSTON, ...
.... Dollars,
at the STATE BANK OF EVANSTON, with interest at the rate of .... per cent per annum from .... until paid.

And to secure the payment of said amount .... hereby authorize irrevocably any attorney of any Court of record to appear for .... in such Court, in term time or vacation, at any time hereafter, and confess a judgment without process in favor of the holder of this note, for such amount as may appear to be unpaid thereon, together with costs and .... dollars attorney's fees, and to waive and release all errors which may intervene in any such proceedings, and consent to immediate execution upon such judgment; hereby ratifying and confirming all that .... said attorney may do by virtue hereof.

....

No. .... Due............ ....

COLLATERAL NOTE

$.......... Evanston, Ill.,............................

ON DEMAND, *after date* .... *promise to pay to the order of the* STATE BANK OF EVANSTON, *at its office,*
.... Dollars,
for value received, with interest at the rate of .... *per cent per annum, after date, having deposited with said Bank as collateral security for the payment of this and any other liability or liabilities of the undersigned to said Bank heretofore or hereafter contracted, the following property, viz.:*

....
....
....
....

the market value of which is now $.......... *If the Bank or its assigns* *shall find that said collateral security is of less value than above stated, or any of said security shall decline in value, or the liability of the undersigned to said Banks or its assigns shall be at any time increased, said Bank or its assigns may call for additional security satisfactory to the holder hereof, and failure to furnish the same shall make this note at once due and payable. The undersigned hereby gives said Bank, its attorney or its assigns, full power to sell said collateral or any part thereof, without notice or demand, at public or private sale, in case said collateral shall be found of less value than above stated, or in case any of said collateral shall decline in value, or in case additional security, satisfactory to the holder hereof, shall not be furnished upon call as above provided, or in case this note or any other liability of the undersigned to said Bank shall not be paid at maturity, and if such sale shall be public or at Broker's Board, the holder hereof may purchase at such sale. In case of such sale the proceeds, after payment of the costs and expenses connected with said collateral, and the sale and delivery thereof, may be applied upon any liability of the undersigned to the holder hereof, whether due or not, and the surplus, if any, shall be paid to the undersigned, his or their assigns; but if the proceeds of such sale shall not pay in full the liabilities of the undersigned to the holder hereof, the balance of such liabilities shall become at once due and payable and bear interest at the rate of seven per cent per annum from the time of such sale. In case of any exchange, or addition to the collateral above named, the provisions hereof shall extend to such new or additional collateral. In case of the insolvency of the undersigned, any indebtedness due from the legal holder hereof to the undersigned may be appropriated and applied hereon at any time, as well before as after maturity hereof.*

No. ....

Due ....

402. *Judgment note.*—In the judgment note the signer authorizes the bank through its attorney to appear in any court and get judgment in the amount of the note without the trouble and expense of proving the existence of the debt or giving the signer the right to defend himself against the judgment. This form of note enables the bank to become a judgment creditor in case the signer is threatened with insolvency and thus to place itself in a preferred position in collecting the debt.

403. *Collateral note.*—The collateral note is the ordinary note required of borrowers who pledge collateral to secure the debt. It will be noted that the collateral deposited secures not only this debt but any other debt that the signer owes to the bank. The bank has the right at any time to demand additional collateral, and failure to deposit such collateral makes the note due at

once. The bank does not have to wait until the maturity of the note to proceed against the debtor. Furthermore, if additional collateral is not forthcoming the bank has the right to sell the collateral at public or private sale and is even permitted to buy it in itself if it cares to do so. If the sale of the collateral should fail to cover the indebtedness the balance is still an obligation against the debtor. If the signer should become insolvent the bank is a preferred creditor and may seize the collateral.

These provisions, which seem so drastic, are necessary in order that the bank may protect itself in times of falling values. The banks making collateral loans usually depend almost entirely upon the collateral and very little upon the general credit of the borrower. There have been numerous cases, however, to show that a bank is not always safe in relying upon the value of the collateral. Forged securities have been used to secure loans, the forgers depending upon the carelessness of the bank in not scrutinizing the securities as carefully as if they were purchasing them.

404. *Risk in collateral loans.*—A few years ago a new stock of the Railway Equipment Company appeared on the curb market in New York. Being in the hands of the promoters of the company the stock was easily bid up to a very high price by means of "wash sales"—that is, the promoters buying and selling the stock among themselves. After the public had become accustomed to seeing the quotations of the stock in the daily newspapers the promoters went to other cities and opened deposit accounts with the banks. Having established their credit they persuaded the banks to accept this stock as collateral with a liberal margin. When the confederates had borrowed as much as they could the banks

were one day surprised and chagrined to find that the price of the stock on the curb market had fallen to almost nothing and that the collateral, which was the only security for the loan, was almost worthless.

The great bulk of collateral loans in Wall Street are call or demand loans. When the lender, usually a bank or trust company, calls the loan the borrower must pay it or his collateral is sold to satisfy the debt. The rates for call money depend upon demand and supply. The greatest market for it is the New York Stock Exchange where it is offered by brokers just like a stock. When it is plentiful, call rates range from 1 to 3 per cent, and money is easy; from 6 to 8 per cent is firm, and when it soars beyond that rate money is stringent. In times of panic the rate has gone past 100 per cent.

405 *Usury laws.*—Any rate of interest higher than that fixed by law is usurious. How then can New York bankers and money brokers charge 40 or 80 per cent for call money?

Before explaining how this is possible let us see just what is meant by the legal and maximum rates of interest as fixed by statute in most states. There is a very wide misconception of what is meant by the legal rate. Contrary to the usual impression it is not always the highest rate that can be charged for borrowed money. Instead, it is, for example, the rate that the court would impose if a judgment to collect an account "with interest" were entered. If the legal rate in the state where the judgment was entered happened to be 6 per cent, the defendant would have to pay 6 per cent. The maximum legal rate is the highest rate that can be charged for money, and any rate above the maximum is usury.

In some states, as for example in New York and Pennsylvania, the legal and maximum rates are the same

—6 per cent; in Alabama both rates are 8 per cent; in Illinois the legal rate is 5 per cent and the maximum rate 7 per cent; in Kansas 6 per cent and 10 per cent respectively; in Indiana 6 per cent is the legal rate and 8 per cent the maximum rate.

406. *Call loans exempted.*—Although the maximum rate in New York State is 6 per cent, the Wall Street bankers can charge any rate of interest for call loans by reason of a section of the state banking law which says: "Upon advances of money repayable on demand to an amount not less than five thousand dollars made upon warehouse receipts, bills of lading, certificates of stock or deposit, bonds and other negotiable instruments pledged as collateral security for such repayment, and any bank or individual banker may receive or contract to receive and collect as compensation for making such advance *any sum to be agreed upon* in writing by the parties to such transactions." Thus the banker can charge any rate for call money for sums of $5,000 and more that the borrower is willing to pay. With a time loan—a loan made for a specified period, as ninety days—the rate cannot be higher than the maximum rate.

Most people believe that a call loan is for one or two days only. Some call loans run forty days or even more. The interest on it changes with the fluctuations in call money rates; the interest on a time loan remains the same during the life of the loan.

407. *Loans on open book accounts.*—Some bankers loan funds to business men on the security of open book accounts of their customers or on installment contracts. This business is strongly discountenanced by the more conservative banks, they classing bankers who engage in it with pawnbrokers. Bankers who do this business claim that it is exactly the same as the old business of

discounting trade paper. They argue that as trade paper is now no longer given by customers to the same extent as formerly, the merchants have none of it to discount at their banks and therefore it is permissible for them to borrow on the funds due them from customers, although these are not in the form of notes. Conservative bankers on the other hand say that under present conditions of banking competition any business man can borrow on his general credit all the bank funds he is entitled to and that those merchants who can get funds only by hypothecating and assigning their book accounts are undeserving of any bank credit at all.

408. *Providing temporary capital.*—The financial manager of a business is concerned principally with bridging over the interval between the purchase of materials, etc., and the realization of the value of the output of the industry. The value of all the materials and stock represents capital which must be contributed by someone. If materials can be bought on credit, the seller is the one who has provided that capital for a short time, though he may shift this burden on to a bank by discounting a note taken in payment for the materials. The buyer of the materials may thus partially escape the burden of providing temporary capital. On the other hand his own customers—the purchasers of his finished product—may put upon him the necessity of furnishing capital to them by demanding terms of from thirty days to six months. In most cases the business man will find he is able to shift less of a burden upon concerns from whom he buys than that he is compelled to bear on behalf of his own customers. When collections are slow this extra burden is correspondingly increased.

The task of the financial manager, therefore, is to get through the assistance of banks the use of capital not needed by its owners. Banks act as agents between the owners and the users of capital. They are always ready to furnish capital to any one, provided the borrower can give satisfactory security for repayment. The security offered to a bank may be either the general credit of the firm, based upon its reputation for prompt payment; the possession of property above its liabilities; or the maintenance of a certain deposit balance at the bank. In case these are not sufficient, capital may be granted on collateral—some form of property hypothecated to the bank.

CHAPTER XXII

LOANS AGAINST COLLATERAL

409. *Collateral for bank loans.*—The form of collateral most easily handled is no doubt stocks and bonds extensively dealt in on the Stock Exchange and which are marketable on a moment's notice. Real estate and other forms of permanently invested capital are bad collateral for a bank because of the difficulty of realizing upon them quickly. The third great class of property which may be used for collateral is merchandise and materials representing the investment of that form of capital which it is the legitimate function of banks to provide. If the calculations of the owner are not amiss, this property will be prepared for the market and sold within the near future, so that it embodies the best quality in a collateral security in that it will be liquidated naturally and thus provide funds with which to repay the debt.

410. *Merchandise as collateral.*—The difficulties met with in the use of this most natural form of collateral for bank loans have considerably hindered its employment as such. Merchandise and materials cannot be delivered to the bank as in the case of stocks and bonds. If they are left in the possession of the borrower they may disappear, or substitution may be made, or they may deteriorate through neglect. These risks can be avoided only by placing the goods in the possession of a third party, who acts as trustee for all concerned and

who is required by law to conform to certain rules which make fraud and loss impossible.

411. *Advantages of good warehousing laws.*—It is to the interest of both the banks and the borrowers that the warehousing system should be so regulated that loans can be negotiated on warehoused merchandise as easily and safely as possible. In a great number of cases of financial difficulty on the part of merchants or manufacturers, the source of the trouble lies in the investment of too much capital in merchandise or materials which cannot be sold quickly without loss because of adverse market conditions. The goods have value but time is required to realize upon it. Bankruptcy may be imminent unless the banks consent to provide the temporary capital to carry the merchandise, and their doing so may depend upon the risk involved in loaning upon the security of the merchandise. The value of a warehousing system, regulated by law, is measured by its service in eliminating the risk attendant upon loans on merchandise.

412. *Loans on merchandise a legitimate function of banks.*—The character of bank loans has changed greatly in recent years. There has been a marked decline in the amount of trade paper offered for discount and competition among banks has compelled them to develop new fields.

The collateral loan is one of these, but few banks have been willing to accept anything except stocks and bonds as collateral—loaning on merchandise is still regarded in many quarters as a species of pawnbroking and is classed with loaning on book accounts. Nevertheless loans on merchandise conform more strictly to banking principles, and they promote the industrial property of the community more than any other class of loans in that they give substantial aid to legitimate commerce in marketable goods, which is the basis of all business. Anything which removes obstruction from the free passage of goods through all the processes from raw material until they reach the consumer represents an economic gain. All other business, of whatever kind, is merely auxiliary to this fundamental productive activity. There is no doubt that the immediate future will see a gradual elimination of the uncertainties and risks incident to loans on merchandise and a development of this branch of banking.

413. *Statement of a bank president.*—On this subject President Nash, of the Corn Exchange Bank of New York, at its fiftieth anniversary banquet, spoke as follows:

> The bank has, however, made two important contributions to American banking. President Dunham, being familiar with the grain business, introduced, immediately on taking office, the unusual practice among banks of assisting merchants to carry large stocks of grain and merchandise in this port, by making loans on that class of collateral when represented by the warehouse receipts or bills of lading. It subjected us at the start to the stigma of being a pawnbroker's shop, and this stigma was freely applied. But eventually the principle of advances on merchandise was adopted by other banks, until now it is wellnigh universal. It has always been a distinctive part of our business. Mr. Dunham used to say that wheat and cotton, wool and pork, lard and coffee were as good as gold, and he was ready to give gold to the man who was willing to pledge these commodities as security for its payment. He, however, confined his operations to the great staples named, because the quality and the price were less subject to wide variations, and was chary of general merchandise, where the differences are much more marked, and to a non-dealer somewhat deceptive. This preference for the staples has not prevented us from going

into less desirable lines of business, where the solidity of the borrower has outweighed the disadvantages of his collateral, and varied and sometimes amusing lists of merchandise have been reported to our directors for their approval.

414. *Law of warehouse receipts.*—The great limitation to the use of merchandise as collateral is not so much in stability of values of the commodities as it is the difficulty of maintaining intact and secure the collateral itself. The development of warehousing and the use of the warehouse receipt under such legal regulation as to guard against fraud is gradually diminishing the risk of merchandise loans.

415. *Uniform law.*—A valuable contribution to this end has been the drafting of an "Act to make uniform the law of warehouse receipts" by the Commission on Uniform State Laws in 1906. The success of the Commission in getting its uniform law of negotiable instruments adopted in twenty-eight states and by the federal government makes it more than likely that this new act will soon become a law in all the states. As in the law of negotiable instruments, the warehouse receipt law aims to codify existing laws as far as possible. Whenever anything new is proposed, it will invariably be found a step in the direction of promoting the business of loaning on merchandise. The passage of such a law in states which have not already a similar one is of the most vital interest to merchants and manufacturers as well as bankers. It will hasten the time when loans will be made as readily on warehouse receipts for stored goods as they are now made on stocks and bonds.

The advantage of the warehouse receipt is that it enables the goods described in it to be sold or pledged for a loan of money by the mere delivery of the warehouse receipt, thus avoiding the inconvenience of an actual removal or delivery of the property itself. In other words, the warehouse receipt is a symbol for the property described, and the delivery of the receipt is in law a delivery of the possession of the property.

416. *Risk involved in loans on warehouse receipts.*—The danger of accepting a warehouse receipt as collateral may arise from an insufficient or false description of the property; the unfaithfulness of the warehouseman, who may misappropriate the property committed to his keeping; negligence in caring for it; or from carelessness in allowing receipts to circulate when the property behind them may not exist or may be subject to liens. In all these cases the holder of the receipt might lose his claim to the property and would be forced to rely upon the personal responsibility of the warehouseman for reimbursement of his loss.

417. *Under the present law.*—Under the present law in most states the warehouseman is responsible as bailee for the safekeeping of the goods. He is bound to use ordinary diligence or such care as prudent persons usually take of their property. He is not liable for losses caused by fire, flood, insurrection, or public enemies. If he is guilty of no neglect he is not responsible for goods stolen even by his own employés.

Persons depositing merchandise with a warehouseman are obliged to trust to his fidelity and diligence in taking due care of their property, and persons dealing in warehouse receipts are in the same position, and must also trust to the accuracy of the warehouseman in describing in the receipt the property intrusted to him. If the warehouseman misappropriates the property, or fails to take due care of it; if he falsely or insufficiently describes it in the receipt, the holder of the receipt may lose his claim to the property and may have only an action for damages against the warehouseman.

418. *Issue of receipts safeguarded.*—The proposed act throws definite restrictions around the issuing of receipts, and makes the warehouseman criminally liable in many cases. It provides that all liens on the goods must be set forth in the receipt, including the rate of storage charges. The warehouseman may not insert any clause absolving himself from his legal liability for due care. Duplicate and non-negotiable receipts must be plainly marked as such. The warehouseman shall be obliged to deliver the goods on the receipt if the demand is accompanied by an offer to satisfy the warehouseman's lien, a surrender of the receipt, and an acknowledgment of delivery. The warehouseman shall be justified in delivering the goods to any one tendering the receipt properly endorsed. If a thief presented a negotiable receipt properly endorsed the warehouseman would be protected if he delivered the goods innocently.

419. *Protection to holders of receipts.*—If the warehouseman shall fail to take up and cancel a negotiable receipt when goods are delivered, he shall be liable for failure to deliver the goods to any one who purchases for value in good faith such receipt, whether such purchaser acquired title to the receipt before or after the delivery of the goods by this warehouseman.

A warehouseman shall be liable to the holder of a receipt for damages caused by the non-existence of the goods or by the failure of the goods to correspond to the description thereof in the receipt at the time of its issue. If, however, the goods are described in a receipt merely by a statement that they are said to be goods of a certain kind, or that packages containing the goods are said to contain goods of a certain kind, or by words of like import, such statements, if true, shall not make liable the warehouseman issuing the receipt, although the goods are not of the kind which the marks or labels upon them indicate, or of the kind they were said to be by the depositor. This makes the warehouseman liable for what he asserts only.

420. *Garnishment not allowed.*—Goods delivered to a warehouseman who issues a negotiable receipt therefor cannot thereafter, while in possession of the warehouseman, be attached by garnishment or otherwise, or be levied upon under an execution, unless the receipt be first surrendered to the warehouseman or its negotiation enjoined. In most states the present laws disallow any garnishment; it was thought best in this act not to take so extreme a position but to cover the essential practical point by making it a condition of the validity of such seizure that the negotiation of the receipt be enjoined or the document impounded.

A person to whom a negotiable receipt has been negotiated acquires, according to the act, such title to the goods as the person negotiating it had, and also the direct obligation of the warehouseman to hold possession of the goods for him according to the terms of the receipt as fully as if the warehouseman had contracted directly with him.

421. *Penalty for illegal use of receipts.*—It shall be a criminal offense for a warehouseman to issue a receipt for goods not actually received, or to issue a receipt knowing that it contains a false statement, or to issue duplicate receipts not so marked, or to issue a receipt for goods of which he himself is the owner without stating that fact, or to deliver goods without canceling the receipt. Any person who deposits goods to which

he has no title, or upon which there is a lien or mortgage, and takes a negotiable receipt therefor with intent to deceive without disclosing want of title, shall be guilty of a crime.

Loans may be made on receipts under such a law with little risk or inconvenience to the lender. If the goods are insured his chances of loss are practically limited to deterioration in the quality or value of the goods. Seasonable goods in cold storage, such as fruit, butter, eggs, poultry, etc., must be sold at certain seasons, lest they shrink in value by having to compete in the market with fresh goods at cheaper prices.

422. *Transfer of title to lender.*—Many banks prefer not to accept receipts for warehoused goods as collateral at all but require the transfer on the books of the warehouse to themselves, taking a non-negotiable receipt therefor.

CHAPTER XXIII

CREDIT DEPARTMENT OF A BANK

423. *Credit department of a bank.*—It is only within recent years that credit departments have appeared in the banks. Formerly the cashier was supposed to keep personally all the credit information. However, it has been found preferable by the banks to employ a competent credit man, whose sole business is to accumulate information on credits. In some of the larger city banks and especially in the offices of a commercial paper house, there are highly organized systematic credit bureaus, which have on file every bit of information regarding the credit standing of their customers.

424. *Sources of credit information.*—The chief source of information on credits is of course the statements of the customers themselves. Until within the last few years it was not the custom of the banks to demand written statements from customers and there are still business men who resent the request of banks for statements. As a rule, however, the borrowers have found it to their advantage to make a full statement of their affairs to their banker, knowing that failure to make such a statement will prejudice their credit.

A standard form of customers' statement in use by banks is reproduced below for the purpose of showing the items of information which the banks believe to be important in the granting of loans. In some doubtful cases the banks may require the statement to be certified by a professional accountant.

Form A.

STANDARD FORM OF STATEMENT FOR FIRMS AS ADOPTED BY NEW YORK STATE BANKERS ASSOCIATION.

FROM ....
ADDRESS ....
TO ....

For the purpose of procuring credit from time to time with you for our negotiable paper or otherwise, we furnish the following as a true and accurate statement of our financial condition on .... 190.., which you are to consider as continuing to be full and accurate until we give you written notice of change.

ASSETS.				
Cash on hand	..	...	...	...
Cash in the following banks	..	...	...	...
Name of bank				
" " "				
" " "				
....	..	...	...	...
Notes Receivable of customers (not transferred)	..	...	...	...
Accounts Receivable of customers (not transferred)	..	...	...	...
Notes and Accounts Receivable of partners (not transferred)	..	...	...	...
Merchandise finished (how valued ....)	..	..	...	...
Merchandise unfinished (how valued ....)	..	...	...	...
Merchandise raw material (how valued ....)	..	...	..	...
Land owned by firm, used for this business	..	...	...	...
Buildings owned by firm, used for this business	..	...	...	...
Machinery owned by firm, used for this business	..	...	...	...
....	..	...	...	...
....	..	...	...	...
....	..	...	...	...
TOTAL				

LIABILITIES.				
Notes Payable given for merchandise	..	...	...	...
Notes Payable negotiated to own banks	..	...	...	...
Notes Payable otherwise disposed of	..	...	...	...
Accounts Payable	..	...	...	...
Deposits of Money with Us as follows				
By......... $.........				
By......... $.........				
By......... $.........				
By sundry persons $.....	..	...	...	...
....	..	...	...	...
....	..	...	...	...
....	..	...	...	...
Mortgage Debt	..	...	...	...
Chattel Mortgages	..	...	...	...
....	..	...	...	...
....	..	...	...	...
Total Liabilities	..	...	...	...
Net Worth	..	...	...	...
TOTAL				

CONTINGENT LIABILITY: Notes Receivable of customers Discounted or Sold and not included in assets enumerated above	..	...	...	..
Other contingent liability	..	...	...	..
We Have Not Pledged or Assigned any of the above Accounts Receivable; our Assigned Accounts Receivable amount to	..	...	...	...
Other assets used as collateral	..	...	...	..
INSURANCE: on merchandise $......buildings......$......machinery $...... Total Insurance	..	...	...	...
BUSINESS and RESULTS: Annual Sales for the year ended...... 190..or from.....190..to......190..	..	...	...	...
Gross Profits on Sales For the same period	..	...	...	...
Expense of Conducting Business " " " "	..	...	...	...
Net Profit " " " "	..	...	...	...
Other Income, including investments " " " "	..	...	...	...
Combined Profit " " " "	..	...	...	...
WITHDRAWALS by PARTNERS (not included in expense of conducting business) from........190..to........190..	..	...	...	...
BAD DEBTS for the period from..........190..to..........190..	..	...	...	...
SPECIAL CAPITAL: contributed by..............until......190..	..	...	...	...
" "............... " ......190..	..	...	...	...
" "............... " ......190..	..	...	...	...
GENERAL PARTNERS: name..................Outside Net Worth	..	...	...	...
" .... " " "	..	...	...	...
" .... " " "	..	...	...	...
" .... " " "	..	...	...	...

BANK ACCOUNTS: where kept other than above ....

MORTGAGES: on what assets a lien ....

Average TERMS on which we SELL ....

Average TERMS on which we BUY ....

DATE of ORGANIZATION and EXPIRATION of PARTNERSHIP ....

TIME of YEAR when Notes and Accounts Receivable of customers, Uncollected, are generally maximum ....minimum..................

TIME OF YEAR when Stocks of Merchandise on hand are generally maximum .... minimum ....

TIME of YEAR when Liabilities are maximum ....minimum...........

STATEMENT: is it based on actual inventory?..........if so, Date..........

VERIFICATION: have the books been audited by a Certified Public Accountant? ....if so, Name and Date of Audit...................
....

BUSINESS: what kind of business do you conduct? ....

BOOKS: what kind of books do you keep? ....
....

(Please sign firm name)...

Date Signed.....................190.. By.....................

Please Give Particulars of Each Parcel of Real Estate

Description	Street and number	City or town and state	Title in name of	Estimated value	Mort-gages	Equity
....	....	....	....	....	....	....
....	....	....	....	....	....	....
....	....	....	....	....	....	....
....	....	....	....	....	....	....
....	....	....	....	....	....	....
....	....	....	....	....	....	....
....	....	....	....	....	....	....
....	....	....	....	....	....	....

The law is still uncertain toward persons who make false statements for the purpose of gaining credit. The notorious failure of A. Booth and Company of Chicago in 1908 induced the legislature of Illinois to pass a law in 1909 making it a criminal offense to obtain loans on false or misleading statements. The penalty for doing so is fine and imprisonment.

425. *Credit agencies.*—The second source of information is the credit agencies. The chief credit agencies in this country are Dun's and Bradstreet's. Concerning the function of these agencies one banker has said: "Any man is unwise to base a $50 credit solely on an

agency rating or report, but any man, business house or institution is doubly unwise who cannot get back in full all that he pays out to the commercial agency, provided he knows how to use the information which he receives."

The fact that the agencies charge the same fee for reporting upon a credit involving $50,000 as they do upon a credit involving only $5, makes it impossible for them to do more than superficial work. The reports are obtained by reporters who are not expert credit men, and who are required furthermore to report upon ten to fifty concerns in one day. The reporter will first try to get a statement from the concern under investigation, and then will go to the banker or local lawyer for information. The maximum salary of the bulk of such reporters is not much above $20 per week. The business is very profitable, in the case of Bradstreet's paying a profit of 6½ per cent on its capital of $1,500,000. The charge for the service of an agency is $100 a year. This sum entitles the subscriber to 100 special reports and a book of ratings semi-annually. The reports are valuable in suggesting points which might otherwise be overlooked and in tabulating information obtained in other ways.

426. *Duties of credit man.*—It is the business of the credit man to cultivate every possible source of information bearing on credits. He must consult court records to find suits which have been filed or judgments rendered. He must know when any of his clients have recorded mortgages. He should find out the business affiliation of his clients so as to get clues as to the kind of business done by them.

The credit department of a bank affords the best opportunity of any department for the young man who wishes to learn the banking business. The experience of getting information about the business men of the community and about the peculiar conditions existing in the various lines of trade, will cultivate in him the power of judgment so that by actual practice in the subordinate position he may qualify himself for the desk of an officer. This can scarcely be said of any other subordinate position in a bank.

427. *The commercial note-broker.*—The note-broker is a middle-man between the lending bank and the borrowing business man. His profession is to borrow money for other people, and the need for his services and the amount of his remuneration will depend upon his skill in placing loans and in obtaining favorable terms from the lenders. To borrow money to the best advantage is an art requiring expert knowledge and ability beyond that of the average business manager, and if his borrowings are large enough to make it worth while it is profitable for him to engage the services of the note-broker in this business.

The business of note-broking has changed radically within the last decade and is still in the process of rapid development. The old-fashioned broker was simply an agent who, for a certain commission, placed the promissory notes of his principal at the lowest rate of discount he could obtain. He incurred no liability, had no occasion to employ capital of his own, and did not attempt to place the paper far from the locality of its inception.

428. *Change in the business.*—The note-broker on commission has given place to the dealer in commercial paper who buys and sells outright the promissory notes of his clients. The business is practically controlled by seven or eight large firms whose operations extend over a large part of the whole country. The nature of

the business is such that the tendency toward centralization in a few strong hands is inevitable because of the disadvantages under which the small operator must labor. Large capital, the confidence of lenders, a thoroughgoing and efficient credit department which is necessarily expensive, and a large staff of salesmen, are factors against which the small broker finds it impossible to compete.

In order to buy and sell paper to the best advantage, the modern note-broker, or more properly the dealer in commercial paper, must have a capital approximating $1,000,000. His clients demand the money upon their notes at once and the notes must be held several days before they can be realized upon. With such a capital our typical dealer in commercial paper can do an annual business of $100,000,000 at an expense of about $100,000, or one-tenth of 1 per cent. He can make a good profit if he can get one-fourth of 1 per cent or even less margin on the paper he handles.

429. *Demand and supply of commercial paper.*—In times when the demand for loanable funds is great and the interest rate high, the dealer has no difficulty in purchasing first-class paper. He does not need to seek out new clients but on the contrary is kept busy marketing the paper of his old clients. The energies of the dealer are directed almost entirely to selling. The house with a well-organized and efficient selling force has a great advantage over competitors. The firm here in mind has twenty salesmen covering nearly the whole of the United States. Through these agents it is enabled to keep informed on the money situation of every section.

The rate of interest in any locality is determined by the demand for and the supply of loanable funds. The forces vary from time to time with more or less regularity. While the cotton crop is being marketed in the South, for instance, the demand for funds is very great and beyond the available supply. Late in the year, when the money returns to the banks, the supply of loanable capital may far exceed the demand and very low rates of interest may prevail. There is scarcely any locality which is not subject to these seasonal fluctuations as well as the accidental fluctuations which may occur at any time.

430. *Areas of high and low rates.*—The monetary conditions of the whole country might be represented in much the same way as the weather conditions on the weather map—there are areas of high money and areas of low money, and these "highs" and "lows" move across the map with more or less regularity. Being able to predict the movement of the "lows," the expert dealer in commercial paper is able to take advantage of low interest rates wherever he finds them, while the borrower himself is confined to his own immediate locality where the rate most of the time may be higher than the "low" in some other section.

Owing to his ability to sell paper at a lower rate of discount than the borrower himself, the dealer may realize a handsome profit while discounting at the same rate as the local banks. As far as the rate is concerned, the borrower may just as well patronize the dealer as the banks. There are, however, four additional inducements which the dealer may offer.

431. *Discount offer by dealer.*—(1) It is an almost universal rule of the banks to require that the borrower shall maintain a deposit balance equal to at least 20 per cent of his loan. This means that the borrower can actually use but $80 out of every $100 borrowed from

the bank. If he has borrowed at the rate of 5 per cent interest, he actually pays over 6 per cent for every available $100. If he sold his paper to a dealer he would realize at once the full face value of the loan.

(2) By selling his paper through a dealer he keeps his credit at his bank open and unimpaired, so that in case of emergency he has this resource to fall back upon.

(3) By establishing relations with a dealer he creates a broader market for his paper and may reasonably expect the dealer to favor him as an old customer when otherwise he could not get accommodation, perhaps because of a stringent money market or because his credit showing was not satisfactory to those with whom he had no previous dealings.

(4) The dealer has facilities for floating a much larger loan than any bank could handle, thus relieving a large borrower of the necessity of negotiating with several parties.

Dealers in commercial paper do not endorse the notes they sell, nor do they assume any liability except for their genuineness. The notes are made payable to the maker so that they may be negotiated without endorsement. The success of a dealer is so closely dependent upon his reputation for handling only good paper that he will use every effort to protect the holder against loss; so there is practically little risk in buying his paper. In case of a failure the dealer will take charge of the claims of his customers, and as this usually makes him the largest creditor he will be able to prevent undue loss by reason of unskillful handling of assets of the failed firm.

432. *Credits.*—The best guarantee against loss furnished by the dealer is the close attention given by the credit department to every note sold. The most effi-

cient credit departments in the country are those maintained by the dealers in commercial paper. No client is taken until his financial condition has withstood a most searching investigation. A statement is always required and must be revised at frequent intervals. Each salesman has copies of these statements to show to prospective customers. Under ordinary circumstances no paper will be bought by the dealer unless the statement of the maker shows quick assets (cash, merchandise, and bills receivable) of at least twice the value of the liabilities. The credit department may be regarded as the most vital part of the business of dealing in commercial paper. Few banks outside the largest cities have credit facilities and they are disposed to rely more and more on the information furnished by the note dealer as experience proves its reliability to them.

433. *Size of notes.*—The notes sold are usually divided into amounts of $5,000 each and rarely run longer than six months, the average being about ninety days. Prices are quoted in per cent, the higher the rate of discount the lower the price of the note. For example, a note for $5,000 due in six months without interest may be bought by the dealer for 6 per cent, which means that it would yield to the borrower $5,000 less the interest on $5,000 at 6 per cent for six months ($150). The net yield would be, therefore, $5,000 minus $150, or $4,850. If the dealer sold it immediately to a bank at 5½ per cent for six months (or whatever time remained until the note was due in case the dealer had held it for a while), this would amount to $4,862.50 ($5,000 less $137.50). The profit to the dealer would be the difference between $4,862.50 and $4,850, or $12.50.

The business of dealing in commercial paper and distributing it throughout the country on a large scale is so recent and is developing so rapidly that the total effect on the banking situation has not been fully worked out. An inevitable tendency will be to equalize the rate of interest throughout the country; the smallest country bank will have loaning facilities almost as good as the largest city bank. There will be no inducement for it to deposit its surplus funds in New York at 1 or 2 per cent interest when it can buy first class paper at much higher rates. On the other hand, business firms who are large borrowers will have a market for their paper as wide as the whole United States and will thus be emancipated from local restrictions.

CHAPTER XXIV

HISTORY OF BANKING IN THE UNITED STATES

434. *Characteristics of early banking.*—The early history of banking in the United States is for the most part a history of the issue of circulating notes. Prior to the national bank act of 1865 which greatly restricted note issue, the deposit currency represented but a small proportion of the circulating medium of the country and hence occupied a relatively unimportant place in the business of banking. Particular attention must be given, therefore, in a discussion of banking prior to 1865, to the success and failure of the various plans for issuing notes.

435. *Relations with government.*—Another function of early banking, however, was to facilitate fiscal operations of both the federal and state governments. Although this has continued to be a banking function to the present day, its early history plainly shows that it is not a safe one, however efficient it may seem; and there is a marked tendency toward the complete divorcement of banking from financing government expenditures. This divorcement has already taken place in the operations of the states, and remains in the operations of the federal government only in the requirement that bank notes be secured by a deposit of government bonds with the Treasury, a requirement which creates a fictitious demand for bonds and so lowers the interest rate that there is practically no demand for them except from the banks. In this

way it is still a function of banking to finance government loans.

436. *Historical periods.*—The history of banking in this country may be divided into four periods: (1) First bank of the United States; (2) Second Bank of the United States; (3) state banking, and (4) national banking. In point of time these periods are not at all distinct because they overlap, but there was a period in which each was the most important development in banking.

437. *Some early banks.*—Prior to the establishment of the First Bank of the United States several banks existed which are worthy of note. The first one established was the Bank of North America in Philadelphia, chartered by Congress in 1781. It was capitalized at $400,000; $250,000 being subscribed by the government. Considerable doubt existed as to the powers of Congress in chartering a bank, hence in 1782 a charter was obtained from the State of Pennsylvania. During the years of financial chaos that followed, the bank performed an inestimable service by making large loans to the government for the maintenance of the army. In spite of this service the bank was severely attacked after the close of the war, and for several years had an extremely precarious existence; it was finally rechartered by the State of Pennsylvania, under which charter it prospered until it became a national bank in 1865.

The Bank of Massachusetts, with a capital of $300,000, was chartered by the State of Massachusetts in 1784. In the same year the Bank of New York was established by Alexander Hamilton. For several years it existed as a private bank but was finally chartered by the legislature in 1791. In both states an attempt was made to regulate banking in the interest of the public welfare, and as some of the problems which the legislature attacked are still with us their consideration is interesting.

The most important restriction dealt with the issue of notes. In Massachusetts it was provided that the outstanding loans and notes or credits and debts (except to depositors) should not amount to more than twice the paid-in capital; in New York, the debts of the bank, over and above the money then actually deposited in the bank, were not to amount to more than three times the paid-in capital. Thus a distinction was made between the liability of a bank to its note holders and to its depositors; and there is no doubt of the existence of a reason for this distinction at that time. The deposit currency was not developed, and when borrowers appeared they wanted notes which they could use as money. Deposits were not created, therefore, by loaning as they are to-day, but entirely by the actual deposit of money, a process which did not in any way increase the proportion between the bank's demand obligations and its unmatured assets. The deposit account was exchanged for money, whereas the bank note was exchanged for unmatured credit.

Both banks were prohibited from dealing in merchandise, and the Bank of New York from trading in the stocks of the United States or any of the states. This was evidently an attempt to separate banking and government and, as such, was a correct principle.

438. *Loaning on bank stock.*—The Bank of Massachusetts was prohibited from dealing in bank stocks, another provision which was fundamentally sound. The practice of dealing in, or rather loaning on, bank stocks has many dangers, as was amply proved in the

panic of 1907. It enables unscrupulous financiers to buy one bank, deposit their stock with it as collateral for a loan, and with the proceeds of the loan to purchase the controlling stock in another bank. This operation may be continued until a number of banks are under the same ownership, the benefit to the financier arising from the fact that he obtains control and consequently increased credit from them all. Its danger is due to the fact that any calamity which affects one bank must affect them all. The Bank of New York was restricted from loaning on real estate, or holding it except for banking purposes or when it came into its possession in settlement for debts previously contracted. This was likewise an able provision and one which is found in practically the same form in our present national banking law.

439. *First Bank of the United States.*—The First Bank of the United States was chartered by Congress in 1791. The charter was granted in spite of strong opposition on the part of those who inveighed against the tendency toward centralization of government, they claiming that Congress was not empowered by the Constitution to create banks. Alexander Hamilton, then secretary of the treasury, took the ground that this power was an implied one, and his opinion prevailed.

It was capitalized at $10,000,000, divided into 25,000 shares of $400 each. Of this total $2,000,000 was subscribed by the government and paid for in installments. The remainder was subscribed by the public, one-fourth in specie and the balance in government securities (bearing interest). The bank was governed by a board of twenty-five directors, not more than three-fourths of whom were eligible for re-election. No stockholder was entitled to more than thirty votes, no matter how large his holdings, and foreign stockholders could not vote by proxy. The bank could loan on real estate but could not hold it except for banking purposes. It could not trade in commodities, nor purchase additional government securities. The same distinction between notes and deposits that appeared in the Massachusetts law was recognized, and it was provided that the bank could not become indebted, except for deposits, to an amount greater than its capital stock. The charter was to expire in twenty years.

440. *Success of the first bank.*—The bank enjoyed success from its inception. Branches were established at New York, Boston, Baltimore, Washington, Norfolk, Charleston, Savannah, and New Orleans. The central bank with a capital of $4,700,000 was in Philadelphia. It acquired deposits of government money, receiving probably two-thirds of all money deposited in banks by the Treasury. It paid dividends for twenty years at an average rate of 8 per cent. It loaned commercially, and became a powerful influence in establishing a sound currency.

The bank's loans to the government, however, the installments on the original purchase of stock, and further advances to be paid out of revenue, were not promptly paid and in 1795 had increased to over $6,000,000. There was no market for government bonds, hence it became necessary for the government to sell its stock, which it did in 1802. This sale had only a beneficial effect on the bank, and it is hard to justify at all the government's part ownership of it. When the bank was organized the government did not need credit; it was given no control over the bank except the right to investigate its affairs, which it seldom exercised. Hence the bank was not made any more secure as a place of deposit for government funds; and it had no surplus on hand to invest. If the government became a stockholder for the sake of profit, its judgment was correct for the dividends of 8 per cent were paid annually, and the stock it held was sold at a considerable advance.

441. *Opposition to recharter.*—In 1809 the stockholders petitioned Congress for a renewal of the charter, and their petition was ably indorsed by a report from Secretary of the Treasury Gallatin. He reviewed the successful history of the bank and recommended that its capital be increased $30,000,000, three-fifths of which it should be forced to lend to the government. Unfortunately, however, Congress failed to act and the question was tabled until the succeeding Congress. When the question again arose in 1811 opposition to the charter was not only strong but organized.

First, those who believed in a strict construction of the Constitution were against the bank. Second, the Republicans, now in power, denounced the bank as an aristocratic institution. They pointed out that three-fifths of its stock was in foreign hands. A majority of this was held in England, and a war with that country was imminent. Not pausing to analyze the regulations which prevented control of the bank by foreign interests, or more probably forgetting this regulation for their own political purposes, they urged that in case of war with England the Bank of the United States would find itself in King George's hands. Third, the state banks and the political enemies of Secretary Gallatin had had time to combine against the government bank and its champion. The result was a vote to postpone indefinitely the renewal of the charter, and the dissolution of the bank followed immediately.

442. *Second Bank of the United States.*—The Second Bank of the United States was the result of the financial chaos that followed the dissolution of its predecessor. The War of 1812 found the government funds deposited in state banks, a large number of which had sprung up with the passing of the First Bank. These state banks were poorly managed, and in 1814 specie payment was suspended by all banks except those in New England. The government defaulted on the interest of the public debt. Bank notes circulated only at a considerable discount, varying with the reputation of the issuing bank. A government bank was proposed in 1814 to begin business under a suspension of specie payments, but it was not until 1816 that the Second Bank was founded.

It was capitalized at $35,000,000, one-fifth of which was subscribed by the government. Private subscriptions were payable one-fourth in specie and the balance in government bonds. Thirty per cent was due at once and the balance in equal installments at the end of six and twelve months. The government's subscription was paid in notes, and it received $1,500,000 as a bonus for granting the charter.

The charter was modeled after that of the First Bank. It was to be the depository of public funds. It was to be governed by twenty-five directors, five of whom were to be named by the President of the United States. Its notes were made receivable for all debts to the federal government. Foreign stockholders could not vote. It was required to pay deposits as well as notes in specie, and a forfeiture of 12 per cent was provided in case it failed to do so.

443. *Redemption of notes in specie.*—This was a great step toward sound banking. Although deposits

had always been nominally payable in specie, the custom had grown up of paying them in the notes of other specie paying banks. If these banks happened to be remote the notes circulated at their face value less the expense of redemption; the result was a non-uniform currency. While the new regulation did not entirely prevent the circulation of several kinds of currency, it helped to do so, and was a recognition of the status and possibilities of the deposit system. The forfeiture of 12 per cent in case of suspension of specie payments was intended to prevent a profit being made from suspension. Many of the state banks had been able to pay dividends when they could not redeem either their own notes or deposits except in the notes of other non-specie payment banks.

444. *Mismanagement of the bank.*—Under this charter twenty-five branches were established and the bank soon brought about resumption of specie payment. This, however, was the only benefit it conferred for the first two years of its existence, as it was shamefully mismanaged. Early in its career it began to loan to stockholders on stock which was not yet fully paid for. Speculation in the stock followed, its price advancing and the bank loaning its par value freely. The charter provided that no dividends should be paid on stock which was not fully paid for, but this regulation was violated. The Baltimore branch was in the hands of unscrupulous officers who defrauded it of large sums. Hence, up to 1819 the Second Bank of the United States was managed in such a way that the deposit of public funds, amounting to more than $8,000,000, was greatly endangered, and the bank itself was a disgrace to the nation.

In 1819 Mr. Langdon Cheves of South Carolina was elected president of the bank. He immediately set about correcting the various abuses that had sprung up, reducing loans to stockholders, increasing reserves by importation of silver, and regulating the issue of notes. His administration was so business-like that the bank soon regained popular confidence and prospered greatly the ensuing decade.

The constitutionality of the government bank was settled in 1819 when the Supreme Court, by Chief Justice Marshall, handed down the decision that the establishment of the bank to assist the fiscal operations of the government was an implied power of the Constitution. It was further decided that the states had no power to tax the circulating notes of the federal bank or of the other state banks. Both decisions were extremely important because a different ruling on either would have made impossible not only the Bank of the United States but our present national banking system.

445. *Jackson opposed to the bank.*—When Andrew Jackson became President of the United States in 1829 Nicholas Biddle was at the head of the bank. The question of the renewal of the charter, which was not to expire until 1836, immediately became prominent. Jackson was inclined to object to the bank on constitutional grounds, and his antipathy was increased by charges brought against various officers of the bank by his own political associates. His message to Congress in 1829 plainly showed his antipathy, but in 1831 he spoke in a milder tone. He was still known, however, as an opponent of the bank. In 1831 Henry Clay, the candidate for President on the Whig ticket, came out emphatically for a renewal of the charter. The bank was generally popular and Clay was attempting to capitalize that popularity. Before the election a bill pro-

viding for the renewal of the charter was passed by Congress and vetoed by President Jackson, so that the question became the principal issue of the ensuing campaign. The end of the Second Bank of the United States was in view when Jackson was elected.

In 1833 the government deposits were withdrawn from the bank and cancellation of the government's stock was requested. To pay off this obligation new stock was sold, and the bank obtained a charter from the State of Pennsylvania. It was never again successful, however, principally because its capital was too large for operation in Philadelphia. It was compelled to loan large amounts on the stocks of various companies which were being formed in all parts of the country. The panic of 1837 made many of these stocks worthless, and the bank was forced to suspend. In 1841 it again suspended, and went into liquidation. Its credits were paid in full but the stockholders received nothing.

The history of these two banks is interesting, not so much because of the various restrictions on loans, note issues, etc., as on account of the effect of their intimate relation with and dependence upon the government. In both cases the banks performed great service. They were both successful financially. Their failure was due to the fact that they became involved in politics, as any bank so chartered must become in a country where parties and administrations are constantly changing. This is the great argument against a federal bank in the United States.

446. *State banking.*—Banking under charters obtained from the various states was of two kinds: (1) Private corporations authorized to conduct banks, and (2) banks in which the states themselves had an interest. The first class is of importance chiefly from a technical

point of view, particularly in regard to the success of the several plans adopted for the issue of notes; the second, because of the fact that the states were intimately connected with their management.

The early banks of Pennsylvania, Massachusetts, and New York have already been mentioned; and reference has been made to other state banks which were in existence during the life of the banks of the United States. The most notable movement toward sound banking took place in New England, particularly Boston, and in New York.

447. *Suffolk bank system.*—In New England in the early part of the century the same conditions prevailed in regard to the circulating medium that existed in Philadelphia prior to the establishment of the Second Bank of the United States. The notes of country banks comprised a large proportion of the currency, even in the commercial centers. They circulated at a discount because of the expense of redemption, hence they quickly drove the notes of the city banks out of circulation, and as they were not receivable at par at the city banks while the notes of the city banks were, the latter naturally were presented for payment and the depreciated notes continued to circulate.

In 1818 the Suffolk Bank was incorporated in Boston, and it immediately endeavored to work out a plan by which it could make a profit from the redemption of country bank notes. It offered to make itself an agent of redemption for the country banks, agreeing to accept their notes at par provided a deposit was kept with it to pay it for the trouble. At first only a small number of banks availed themselves of the privilege, but the Suffolk Bank retaliated by sending home for redemption the notes of all banks which did not adopt the plan. The final result was that practically all the banks in New England became members of the Suffolk system, which continued until the national banking law of 1865.

It soon became a clearing house for bank notes, and just as the city clearing houses offset the credits and debits of the various banks against each other in such a way that only balances are paid in cash, so the Suffolk bank canceled the bank obligations of all New England. In 1845 the Massachusetts law was changed to provide that no bank should pay out any notes except its own, a provision which strengthened the Suffolk system because it made necessary quick redemption. All bank notes issued would circulate in the pockets and tills of the people as long as there was actual demand for them; when this demand subsided they would be deposited in a bank, and since they could not again be paid out they would be quickly redeemed at the Suffolk Bank.

During the greater part of the existence of the Suffolk Bank there was no provision in Massachusetts for keeping a specified reserve. The system worked so well, in fact, that specie was seldom demanded. In 1858 the legislature passed a law providing for a reserve of 15 per cent against both notes and deposits. They were thus recognized as liabilities of the bank, equal in every respect; nor was there any reason for giving the notes a preference or maintaining a special reserve for them under the system of quick redemption which existed. The notes were not intended for general circulation but for redemption when the need for them disappeared, in the same manner that our checks and drafts are redeemed to-day. Under this system the average life of the bank note was found to be about five weeks.

448. *New York systems.*—The banks of New York were operated along different lines. There were two plans of note issue: (1) The safety fund system and (2) the bond deposit or free banking system. The first is especially worthy of note because of the recent proposal of the Democratic Party that bank deposits be guaranteed by the government, a proposal which rests on the same basis. The second plan is interesting because it was adopted by the federal government in 1865 to secure the note issues of the national banks.

449. *Safety fund system.*—The safety fund system was established in 1829. Each bank was required to contribute annually one-half of 1 per cent of its capital to a special fund in the hands of the states until its contributions should amount to 3 per cent of its capital. Out of this fund all the debts of failed banks (except those to stockholders on their stock) were to be paid after the assets of the bank had been exhausted. In 1837 the law was amended so that the notes of failed banks could be paid immediately, provided they did not amount to more than two-thirds of the money in the fund. In that year several banks failed and their notes suffered no depreciation. After 1840, however, the number of banks which failed was so large that the safety fund was too small to meet all their obligations, both notes and deposits. Accordingly in 1843 the law was again amended so that the fund was made applicable only to the payment of the notes of the insolvent banks.

450. *Bond deposit system.*—In 1838, however, the bond deposit system was established and all banks incor-

porated after that date did so under that plan. This weakened the safety fund because there were no new contributions to it and the burden fell upon a constantly decreasing number of banks. In 1846 the new constitution of New York provided that note holders were to have a first lien on all the assets of a bank and that in case of failure stockholders were to be liable for an amount equal to their holdings of stock. It further provided that no special charters, such as those under which the safety fund banks operated, were to be granted or renewed. Thus the safety fund system gradually died out with the expiration of the charters, the last of which expired in 1866. All claims against it were paid in full.

451. *Mistakes of the system.*—The safety fund system failed because of mistakes in detail rather than through fundamental defects. The fund at the start should have been made applicable only to the payment of notes. Its real function was to provide a uniform currency which anyone might accept without question. While deposits are equal liabilities of a bank, no one is ever forced to accept a deposit in a particular bank, whereas he may be often compelled to accept its notes without any knowledge of the stability of the bank. It was this general acceptance which the safety fund aimed to accomplish, and it is obvious that the guarantee of notes would have been sufficient. By 1846 this and other defects had been corrected but the system had already received its death blow. Had the defects been corrected earlier it is probable that the bond deposit plan would never have been adopted.

The chief influences which led to the bond deposit law of 1838 were political. Charters under the safety fund plan had been granted only by special act of the legislature, and there was a pronounced sentiment for free banking. The new system, however, might have been established under the safety fund plan had that been working smoothly.

452. *Free banking system.*—The Free Banking Law authorized any person or association of persons to receive circulating notes to be signed and issued as money who would deposit with the comptroller the stocks of the United States, of the State of New York or other approved states, or mortgages secured by real estate worth twice the amount of the mortgage. This deposit of collateral was intended to insure the note holder against loss. No provision for actual redemption in specie was required. Anyone who possessed the necessary securities might enter the banking business, and it is evident that many of them did. Over 130 new banks were organized before 1840. Failures quickly resulted, and it was found that in many cases the securities deposited were not sufficient to meet the notes. Real estate mortgages, however valuable, were not quick assets, hence the law was finally changed so that only the stocks of the United States and of New York were available for deposit.

The notes circulated at first at considerable discount but this was overcome to a certain extent in 1840 by an amendment to the law which necessitated redemption of the notes of interior banks in New York and Albany at a discount not greater than one-half of 1 per cent. This, however, gave an advantage to the country banker because of the profit he could make by loaning his notes at par and redeeming them at a discount. Hence many persons in the cities issued their notes in the country towns. The business of these banks was solely to issue notes. They had no permanent banking houses, and received no deposits. In 1848 this condition was somewhat bettered by a law requiring banks of issue to become banks of deposit as well, but it was never carefully enforced. The effect of these various amendments, however, and of the constitution of 1836 was to improve greatly the condition of the issuing banks, so that failures after 1850 were infrequent and in almost all cases the notes were redeemed at par. After 1860 there were no failures which resulted in loss to note holders.

This system was copied by Illinois, Indiana, and Wisconsin but with disastrous results. In none of these states did the system survive long enough to become perfected. In Illinois particularly a large amount of the securities deposited were those of the Southern States, which became valueless at the outbreak of the war. The bank currency circulated at great discounts, varying with the reputation of the issuing bank. In 1857 there were 112 banks in Illinois; in 1861 only 7, and the note holders had realized less than 40 cents on the dollar.

The only advantage of this system over that of the safety fund is security, which was proved by the experience of New York after the list of acceptable stocks had been restricted to those of the United States and of New York. No currency could be more secure, that is, more certain of ultimate redemption. This, however, is not the only desideratum of a credit currency. Current redemption is as important as ultimate redemption, and in this the system is defective. Moreover, the system was rigid—when the banks deposited securities they were given the right to issue so many notes, and they could not issue additional amounts no matter what the needs of business might be. In other words, the system was inelastic, an attribute which along with that of security it handed down to our present currency system and against which most of the attacks of to-day are directed.

453. *Experience in other states.*—The history of banks in which the various states were part owners was, in the main, disastrous. Kentucky tried the experiment in 1806 and again in 1820. Alabama in 1820 subscribed two-fifths of the capital of the Bank of Alabama, issuing bonds in payment. The original restrictions on loans were ample but they were constantly violated. Loans were freely made to members of the legislature and their friends, and in ten years the discounts increased from $500,000 to $20,000,000. The panic of 1837 found a large amount of these loans worthless, and confidence in the notes disappeared, to be followed by a period of business stagnation. In 1845 the charter expired and was not renewed. Mississippi, Arkansas, Florida, and Louisiana had similar experiences. The Union Bank of Louisiana was established in 1832 with a capital of $7,000,000 raised by a sale of state bonds. It failed ten years later, and was followed by the establishment of private banks under sound laws. Missouri's experience was not so calamitous, although the Bank of Missouri was never a great success, and the state's connection with it was severed in 1866.

454. *Indiana and Ohio.*—The Bank of Indiana was the most successful. It was incorporated in 1834 with a capital of $1,600,000, one-half of which was subscribed by the state. It was given a monopoly of banking in the state and the right to establish branches. Each branch was allotted a certain capital and the issue of notes was restricted to an amount twice as great as the capital.

Each branch bank was required to accept the notes of other branches at par and to redeem its own notes in specie. During the first years of its existence it attempted to loan on real estate security, but the danger of this custom was soon realized and it was discontinued. Subsequently it loaned to farmers on their personal notes and on their crops, but the loans were always for short periods. In this way it transacted business on sound banking principles and continued to thrive until 1865, when the federal tax on state bank note issues forced it out of existence.

The State Bank of Ohio was likewise well managed and highly successful. It had a capital of $3,300,000 and thirty-six branches. Note issue was restricted to an amount not greater than twice the capital, and was further safeguarded by a safety fund of 10 per cent deposited with a board of control. It passed out of existence with the expiration of its charter in 1866.

The state banks, as a rule, did not fail for the same reason that caused the downfall of the two United States banks. While in some instances, notably in Kentucky and Alabama, the banks became involved in politics, their failure was generally due to defects of organization and management.

CHAPTER XXV

NATIONAL BANKING SYSTEM

455. *The National Bank Act.*—The establishment of the national banking system was the result of the unsatisfactory financial conditions which obtained during the Civil War. The currency of the country was composed largely of the notes of over 1,500 state banks, a large amount of which was worthless and almost all of which circulated only at a discount when it was at a distance from its place of redemption. In addition to this currency trouble the fiscal situation of the government was unsatisfactory. It had been forced because of the absence of market for its bonds to raise money by the issue of legal tender notes. These notes impaired its credit and themselves had to be redeemed. Consequently it was anxious if possible to strengthen the market for bonds. Secretary Chase's plan for the establishment of the national banking system commended itself because it would correct in a measure both of these ills. In Secretary Chase's words the principal features of the plan were:

> First, a circulation of notes bearing a common impression, and authenticated by a common authority; second, the redemption of these notes by the associations and institutions to which they may be delivered for issue, and, third, the security of that redemption by the pledge of United States stocks, and an adequate provision of specie.
>
> In this plan the people in their ordinary business would find the advantages of uniformity in currency; of uniformity in security; of effectual safeguard, if effectual safeguard is possible,

against depreciation, and of protection from losses in discounts and exchanges; while in the operations of the Government, the people would find the further advantages of a large demand for government securities, and of increased facilities for obtaining the loans required by the war.

456. *Market for United States bonds.*—The chief feature of the plan was the requirement that all banks which desired to incorporate under the national name should buy government bonds, deposit them with the Treasury and receive circulating notes to the amount of 90 per cent of their bond deposit. Thus these notes would be uniform because they were all to be printed by the government; and they would always be secure because the deposited bonds were pledged to their redemption. Furthermore, a new demand for government bonds would result which would greatly facilitate the nation's borrowing power.

457. *Early history of the act.*—This plan was recommended by Secretary Chase as early as 1861 but it was not until 1863 that it became a law. It did not, however, result in as great a benefit to the national finances as had been expected. There was a decided prejudice against the issue of notes secured by the deposit of bonds, the result of the failure of the several state systems which operated on that plan. Furthermore, the original act was defective in many respects. The state banks, a majority of which had been expected to incorporate under the new law, did not do so in any large numbers; therefore there was no great demand for government bonds.

In 1864 the law was amended making the conditions of incorporation somewhat more attractive, but it was not until 1865, when a law was passed providing for a tax of 10 per cent on all notes issued by state banks, that conversion of state into national banks became general. By this provision all state banks which wished to use notes were forced into the new system. Thus the demand for bonds did not come until the war was over and the necessity of their immediate sale had disappeared.

This national bank law, its operations perfected by various amendments in 1874, 1875, and 1882, is to-day the backbone of our banking system. Its provisions, therefore, as they exist to-day are worthy of careful attention.

458. *Comptroller of the currency.*—Control of the national banking system is vested in a bureau of the United States Treasury under the direction of the comptroller of the currency. It is the function of this department to supervise the issue and redemption of notes, the granting of charters, etc., and to enforce all the various provisions of the law. To accomplish this end, examiners are appointed by the comptroller, whose duty it is to examine from time to time the affairs of each bank in the system. These examinations are made at any time the comptroller selects, and without previous notice to the bank. The examiner has access to all the books and accounts of the bank, and is required to make a thorough investigation of all the loans outstanding. This examination is repeated in detail to the comptroller who calls the bank to account for any illegal practices or situations which may exist. Once a year the comptroller makes a report to Congress showing the condition of the banks in detail. In case of the failure of a bank the comptroller appoints a receiver.

459. *Summary of National Bank Act.*—Charters are granted for periods not longer than twenty years. Application must be made by not fewer than five persons,

with whose good character the comptroller must be satisfied. Fifty per cent of the capital must be paid in before the bank can open, and the remainder within six months. The minimum capital for cities of 3000 population or less is $25,000; for cities between 3000 and 6000, $50,000; for those between 6000 and 50,000, $100,000; and for those greater than 50,000, $200,000.

Each bank must have a board of directors of not less than five members, each of whom must own ten shares of stock. The stockholders are individually liable for all obligations of the bank up to an amount equal to their holdings of stock. In case of failure they are often assessed to pay depositors.

The technical powers of national banks have already been considered. Briefly they are: (1) To receive deposits, (2) issue notes, (3) loan credit on personal security, and (4) discount notes and other evidences of debt. A bank may own only such real estate as is necessary for conducting its business and as comes into its possession in settlement of previously contracted debts. In the latter case it must be sold within five years. It cannot loan more than one-tenth of its capital and surplus to one individual or corporation.

Before a national bank can open it must deposit with the United States Treasury a certain amount of government bonds. This amount varies with the capitalization of the bank. For banks with a capital of $150,000 or less, the requirement is one-fourth of its capital; for those over $150,000 it is one-third. This amount must be deposited regardless of whether or not it expects to issue notes. It is entitled, however, if it so desires, to receive from the comptroller circulating notes equal in amount to the par value of the deposited bonds. These notes are "receivable at par in all parts of the United

States in payment of all taxes and excises, and all other dues to the United States except duties on imports; and also for all salaries and other debts and demands owing by the United States to individuals, corporations and associations within the United States except interest on the public debt." They are also legal tender in payment of any debts to national banks.

460. *Circulating notes.*—The notes must be redeemed on demand in lawful money at the counter of the issuing bank; and to further facilitate redemption each bank is required to deposit with the Treasury an amount equal to 5 per cent of its outstanding circulation. When notes are presented to the government they are redeemed out of this fund; circulation may be retired by redeeming the notes over the bank's counter and sending them to Washington for cancellation, or by depositing money to an equal amount in the Treasury. The deposited bonds are then redeemed. The law restricts redemption, however, by providing that not more than $3,000,000 of national bank notes may be retired in any one month. The notes are subject to taxation by the government. When they are secured by the 2 per cent bonds, the banks must pay one-half of 1 per cent annually on the average circulation; when secured by higher rate bonds the tax is 1 per cent annually. The expense of redemption is also borne by the banks. It is estimated that it amounts to about $63 for each $100,000 of circulation.

All banks are required to keep a certain amount of lawful money on hand as reserve. In New York, Chicago, and St. Louis—designated central reserve cities—this amount is 25 per cent of the deposits. In certain other cities, called reserve cities, the amount is 25 per cent, but one-half of this may consist of demand deposits in New York, Chicago, or St. Louis. All other banks must keep a reserve of 15 per cent, three-fifths of which may be deposited in the reserve cities. The 5 per cent redemption fund may be counted as a part of the reserve. The enforcement of this reserve provision is one of the chief duties of the bank examiner and the comptroller.

There were in 1909, 6893 national banks, with a total note circulation of $648,696,210. To secure this circulation the banks had purchased and deposited with the Treasury $649,389,510 of government bonds. A majority of these bonds bear only 2 per cent interest, the lowest rate paid by any nation in the world. Thus the prediction that the law would create a market for government bonds has been fulfilled. The second reason for its adoption—that it would provide a uniform currency—has likewise been accomplished, for national bank notes have always circulated freely and without discount. The note of the Maine bank is equally acceptable in California as that of the San Francisco bank.

461. *Evils of the national banking system.*—The danger of the system, however, is in the price that is paid for these benefits. In making the currency stable and uniform it has been made inflexible; and in requiring a deposit of government bonds a system has been founded which necessitates a continuance of the national debt. The desirability of paying the national debt when the financial condition of the government permits has already been pointed out. The first mentioned and greatest danger—the inflexibility of the currency—will be considered in the following chapter.

CHAPTER XXVI

PRESENT CONDITIONS OF BANKING IN THE UNITED STATES

462. *The development of bank deposit currency.*—The history of banking in the United States since the establishment of the national banking system and the attendant restrictions upon note issue by the state banks, deals chiefly with the development of the deposit function. The following table shows the increase of deposits relative to capital and note issues in 1909 compared with 1865:

	1865. Dollars.	1909. Dollars.
National banks	$1,513,000,000	$6,893,000,000
Capital and surplus	431,900,000	1,521,000,000
Deposits	549,100,000	4,826,000,000
Notes	171,000,000	648,000,000

While national banks have increased four and one-half times in number, the capital and surplus three and one-half times, and the notes four times, the deposits have increased eight and one-half times. In addition to this, moreover, must be counted the $8,000,000,000 of deposits in state banks which issue no notes whatever.

We have seen that this deposit system gives rise to the most perfect currency known, a currency which performs a vast amount of money work at a minimum cost and which expands and contracts during ordinary times with the varying needs of business. To this function the national banking law has completely subordinated the issue of notes.

It may be well to reiterate the points of similarity and difference between notes and deposits. Both are demand obligations of the bank. The difference is chiefly one of form which gives to the note greater acceptability because of its uniformity. The person who accepts the bank note relies entirely upon the stability of the bank, whereas one who accepts a check relies upon the personal credit of the maker. The courts have held that the tender of a check does not constitute payment until the check itself is redeemed at the bank, provided redemption is requested within a reasonable time. It is obvious, therefore, that the note performs a function which the deposit cannot perform, namely, circulation beyond the reputation of the original holder of the bank credit.

463. *Limitation of deposit currency.*—There are parts of the country, particularly the rural districts of the South and West, where banking facilities are poor and where they must use either notes or actual money. Furthermore, at certain times of the year their demand for currency of one form or another increases. It is obviously poor economy to force these districts to use gold in their hand to hand transactions when that gold can perform three times the money work if held in bank reserves as a basis for the deposit currency. Whereas the deposit currency will expand to meet the seasonal increases of business in the financial centers, it does not aid in any way the rural community which needs more actual money. For this, if for no other reason, the subordination of the note issue function has prevented the greatest economy in banking.

The great danger of our present system, however, lies in the reserve requirements and customs. All banks are permitted to keep a portion of their reserve on deposit in reserve city banks. This permission was incorporated into the law with the idea of enabling the country banker to keep without expense a city account as a basis for exchange. A further reason was to increase the mobility of loanable funds by enabling the city banker to loan in the large centers the deposits of the country bank. These needs exist to-day as they did then, but the loaning by the city banker of the country banker's deposits has been so greatly abused that its dangers have become as great as its benefits.

464. *Seasonal demands.*—This abuse has grown out of the custom of the country banks of depositing in financial centers not only a portion of their reserve during certain seasons of the year but of a large amount of additional cash. Since competition between the city banks has resulted in the payment of interest on country balances, these deposits must be loaned. And since they are demand deposits they must be loaned on demand or call. As the only field for this sort of loan is in the stock market, the promotion of speculation is the chief function of these country balances.

When the demand for loans as for actual money increases in the country, as it invariably does in the late summer, these deposits are withdrawn and shipments of currency requested. Loans must be sharply contracted in the financial centers. The deposit currency will not meet the need because the demand is for circulating medium of general acceptability. Here is a demand, therefore, that under a system of elastic note issue could be financed without shipment of gold, a consequent depletion of reserves and calling of loans.

Perhaps it is well that under our system of reserve deposits we have this check upon speculation but the desideratum is a system which, by enabling the country banker to increase his own currency supply, will lessen the necessity of keeping cash balances in the cities. This would increase his purchases of commercial paper with funds diverted from the stock market.

465. *Depletion of reserves.*—This danger of depletion of reserves is most acute in times of panic. There is then a general demand for liquidation of all credits, including these deposit credits. Bank "runs" are deplored by all bankers, yet it is the country banks themselves which are the first to withdraw deposits. Each bank is anxious to increase the cash reserve in its own vaults, and this can be done only at the expense of some other bank. As reserves are depleted loans must be called, and the loaning power of the banks is sadly crippled at a time when it is greatly needed. With the calling of loans come falling prices, and if borrowers cannot borrow they must sell their property at great sacrifice. It would not be the function of bank notes to prevent failures of concerns which were over-extended and unhealthy but the issue of true bank notes at such times would save many solvent firms temporarily in need of funds.

This withdrawal of deposits becomes so general both on the part of the individual and the country bank that during the recent panic the city banks were forced to refuse the payment of deposits in currency. This has been done illegally, of course, but at such times expediency rather than legality is the paramount issue. In this way only have bank reserves been maintained.

466. *Government deposits.*—The Aldrich-Vreeland Law, enacted by Congress after the panic of 1907, attempted the alleviation of this condition. Under the system prior to 1907 the government could deposit surplus funds in national banks only when the deposit was secured by the hypothecation of government bonds.

During the recent panic the secretary of the treasury not only issued government bonds to be used as a basis for government deposits but also accepted other standard bonds in their stead. This was found to be effective as well as safe, and was legalized by the Aldrich-Vreeland Law which authorizes the acceptance by the government of certain classes of municipal bonds. This should always have a beneficial effect in times of panic, provided the government has a money surplus.

A more certain method of obtaining money to increase reserves is the purchase of gold abroad. Gold may always be obtained provided a sufficiently high price is bid for it. The large banks, particularly those in New York, can exchange their interest-earning resources, a large amount of which are well secured stocks and bonds, for gold in the markets of the world. Obviously, however, this method is extremely slow and very likely to be expensive, as it involves the sale of good collateral at sacrifice prices.

467. *Inelasticity.*—Although the aggregate amount of notes outstanding has increased four times in amount since 1865, the increase has had nothing to do with the expansion and contraction of business. A perfect currency must have the attribute of elasticity, that is, not only the ability to expand when necessary but the power to contract automatically when the necessity for expansion is removed. In neither respect do our own national bank notes meet this need. The requirement that bonds must be purchased and deposited in advance, makes the procedure so slow that oftentimes the notes cannot be issued until the demand for them has disappeared. Contraction is even slower because of the restriction that only $3,000,000 in the aggregate may be retired in any one month.

468. *Expansion of bank circulation.*—As a matter of fact the amount of notes outstanding varies not at all with the business needs of the country but entirely with the price of government bonds. Upon this latter and the current commercial rate of interest depend the profit to be made out of circulation. When bonds are low there is a tendency toward purchasing them and increasing circulation; when they are high the tendency is in the opposite direction. The National City Bank of New York, in a recent circular, states:

> Owing to the fact that the bank must part with more money to buy the bonds which it will require as a basis for circulation than it will receive back in circulating notes (because of the premium on government bonds) its profits in circulation increase as the average rate of interest in the money market declines; and as average money market rates advance, the profits on circulation decline. This is caused from the fact that it could loan the entire sum which it invests in bonds at the average money market rate, but if it takes out circulation it can only loan an amount equal to the par value of the bonds and loses the interest on the premium.

The higher the market rate of interest the greater will be the loss on this premium, hence a smaller profit on circulation. Inasmuch as the rate of interest increases with increased demand for money, the profit on circulation declines where an increase of notes is most needed. The dependence of the aggregate amount of circulation upon these two influences was never more completely proved than during 1908. Both the price of government bonds and the rate of interest were very low; and in response thereto circulation increased many million dollars.

It is obvious that comprehensive reform is necessary if the nation is to have a currency which will finance economically its business needs and enable it to pass from periods of great activity to quietude without complete paralysis of its economic machinery. The chief defects of the present system are decentralization and inelasticity.

469. *Lack of unity in our system.*—In addition to the 7000 national banks there are a great many more state banks and trust companies, which are not only direct competitors of the national banks but which are governed by different laws and regulations. The result is obviously a mechanism with 15,000 managers, each interested in the welfare of his own institution. A system must be devised which will enable the banks to work in unison instead of at cross purposes with each other and which will render possible the issue and redemption of notes as the need for them appears and passes.

470. *Savings banks.*—A discussion of the present conditions of banking in the United States is not complete without reference to savings banks. The regulation of these institutions has, for the most part, been left to the states, and in most cases the states have failed to pass effective legislation. The savings bank is the bank of the wage earner whose accumulations are worthy of the most careful protection. In the aggregate they already amount to a fabulous sum, and the system is only in its infancy. The mutual savings bank laws of New England and New York are the most perfect. In these banks there are no stockholders, the profits being distributed entirely among the depositors. Their investments are restricted to the very highest class of bonds and mortgages, and their affairs are administered by men of ability and public spirit who serve without compensation. In the West practically all the savings

banks are organized for profit and no careful regulation of investments is attempted.

471. *Postal savings banks.*—It is this situation which has given rise to the demand for postal savings banks—banks managed by the government through the medium of the post office department. It has been proposed that money be received on deposit at all post offices and that a low rate of interest, probably 2 per cent, be paid. The postal savings bank is hardly needed in New England, but there is great need either for its establishment in the West or for more effective regulations of the existing institutions there.

It is probable that the establishment of a postal savings bank would bring out of hiding a considerable amount of gold which is being hoarded by ignorant persons, and that money withdrawn from other banks during panics by persons who feared their insolvency would be deposited with the government banks and thus find its way back into circulation. This would necessitate, of course, a provision authorizing the government to deposit money so obtained in the national banks; and if a system were established on this basis it should prove to be of great benefit. At present it is being denounced by the existing banks largely for selfish and short-sighted reasons. The postal bank would not compete directly with carefully regulated savings banks because of the low rate of interest that would be paid and because it would not offer the same banking facilities. It would, however, cater to a class which at present does not deposit its money at all and to persons in isolated communities where there are no banking facilities.

472. *Guarantee of bank deposits.*—There is another movement on foot in regard to the regulation of banking which is worthy of note, namely, the guarantee of

bank deposits by the government or by the states. It was a prominent plank in the Democratic platform of 1908 and is now in operation in Oklahoma. Bank failures and losses to the depositors resulting therefrom have been so small in the past that it is estimated that a small assessment on each bank would create a fund large enough to pay the depositors of all insolvent banks. In this way confidence in the banks would be implicit and they would not become subject to "runs."

The plan has been vigorously attacked, however, by the banks. Their position is substantially that the system would place a premium upon incompetent and dishonest banking, and under present conditions there is little doubt of the correctness of the contention. The strong bank must be taxed to pay the depositors of the failed bank, and at the same time it would lose the prestige that results from its strength. Depositors would pay little attention under such a system to the stability of a bank, because their deposits would be secure in any bank they might select. They would be governed largely by the inducements offered by the various banks, and in spite of strict regulation of these inducements it would be very difficult to keep them from being made without the knowledge of the authorities. The inevitable result would be the establishment of many new banks, expansion of credit, speculation, and finally, collapse.

The advocates of the plan claim that these conditions can be prevented by frequent and searching examinations. This position is correct only if such examinations are possible. And it has been the experience of the country that they are not. Many banks have failed only to have the receivers discover that they have been insolvent for years without the knowledge of the authorities who have examined them. This would be particularly true if a national system of guarantee were adopted to cover 15,000 banks operating under different conditions. Whether or not effective examination is possible in a single state where banking conditions are uniform will be seen in the experience of Oklahoma; and upon the effectiveness of the examination and regulation depends the success of the system. It will be watched with great interest because, if it proves practicable, it will be generally adopted as a great advance in the science of banking.

CHAPTER XXVII

RELATION OF BANKS TO WALL STREET

473. *Market for securities in the United States.*—New York City is the central market of the United States for securities just as London is of the whole world. The term Wall Street, by which is meant the financial center in New York, is synonymous with markets for stocks and bonds. Whenever the capital requirements of an enterprise are too large for the local capitalists to handle it is the custom for promoters to finance their proposition in New York. Capitalists with funds for investment and an enterprise needing those funds are brought together by the financial institutions of Wall Street. The business of bringing the capitalists and the enterprise together is very complicated and may require a long time. In fact, a large proportion of the securities floated in Wall Street remain there in the hands of the speculators.

When a corporation wishes to raise capital it may issue either stocks or bonds. In order to dispose of its stocks and bonds to the capitalists it is necessary that a market be made for them. When the United States Steel Corporation was organized in 1901 the problem of disposing of the vast amount of stocks of that corporation was an exceedingly formidable one. The task of getting the public interested was entrusted to one of the shrewdest stock market manipulators on the exchange. So successfully did Mr. Keane manipulate the market for both common and preferred shares that the public, speculators and investors were induced to buy large blocks of these securities.

There is a great deal of similarity between the market for securities and the market for any other commodity. The interval between the issue of the securities and the moment when they reach the ultimate investor who puts them away in his strong box for the sake of the income which they earn, requires the use of circulating capital, just as a merchant handling dry goods must provide sufficient capital to carry his stock of goods on an average of from three to six months.

474. *Working capital of dealers in securities.*—The middlemen who carry the securities in Wall Street before they reach the ultimate investor need in their business enormous sums of temporary capital. These middlemen are the bond houses and the speculators. The capital required is largely furnished by banks, nearly all of it in the form of bank credit. The corporations which issue the securities are paid for them as soon as they pass into the hands of the middlemen. The middleman will probably pay for them with a check which the corporation can deposit and against which it can draw its own checks in making payments; these checks drawn by the corporation are probably deposited again, and so on indefinitely. This bank credit which the corporation receives for its issues of securities serves the purpose of the corporation in producing whatever capital goods it needs.

The middlemen, either bond houses or speculators, who purchase the securities, borrow the bulk of the bank credit they require from the banks. The banks making a specialty of loaning credit for this purpose are known as Wall Street or financial banks. The credit loaned to the speculators or bond houses is based on collateral security. This collateral security is the same stocks and bonds which the credit paid for.

475. *Details of the collateral loan.*—We have discussed, in the chapter on loans, the nature of the collateral or call loan. The volume or amount of this particular business is so enormous that it is worth while to examine more closely its details. Suppose, for example, that a speculator buys 100 shares of Union Pacific common stock at 195. This quotation means that the 100 shares of Union Pacific stock are worth 195 per cent of par, which is nearly always $100. Therefore the 100 shares will cost the speculator $19,500. The stock will be purchased through the broker, and if the purchaser is a speculator and not an investor it is quite likely it will be purchased "on margin." The customer deposits with the broker from 10 per cent to 20 per cent of the value of the stock in order to protect the broker against any loss should the value decline.

The rules of the New York Stock Exchange require that every purchase and sale must be bona fide and that actual delivery of the stock must be made. The broker is not in possession of enough capital to pay for the stocks purchased on margin by his customers and must go to the bank for accommodation. The broker pays for the shares by drawing a check on the bank with which he is in the habit of doing business, and by having it certified. The bank will loan on collateral like Union Pacific probably 80 per cent of its market value, which gives the bank a margin of 20 per cent in case there is a break in the price. The balance of the purchase price is made up by the margin of the customer and the capital of the broker.

476. *Certification.*—It is quite likely that at the time the broker asks for the certification of the check he has

not sufficient funds in the bank to cover, nor can he hypothecate the stock until he has paid for it. The bank, however, readily certifies the check, depending upon the receipt of the collateral and the granting of a demand loan within a few hours.

This is over-certification and is forbidden by the National Bank Act, which says that no national bank may certify a check unless the drawer has on deposit a sum of money equal to the amount of the check. In Wall Street this law is generally disregarded. Usually the banks protect themselves against technical violation by giving the brokers credit for certain sums for the day, accepting a note in the morning for it. These notes are called "day notes." No interest is charged on the credit extended, because the brokers are constantly depositing checks as well as drawing them. The extent of this business of certifying brokers' checks is apparent from the figures for the year ending October 1, 1906, which total up to the enormous amount of $24,500,000,000.

477. *Restrictions on collateral.*—Most of the banks are reluctant to take too much of any one security as collateral, and it may be necessary for the broker to have several bank connections so that he can distribute the shares among them. Usually the banks will not take industrial shares alone but require an admixture of railroad shares. Furthermore, only those securities which have a ready market will be used as collateral on demand loans.

478. *Call loan rate.*—The rate of interest charged on these demand loans is exceedingly variable, running all the way from 1 per cent to 186 per cent per annum. If during the course of the loan there should be a sharp advance in money rates the borrower is notified that the rate charged will be advanced. If the broker objects

to the advance he is at liberty to pay the loan and seek accommodation elsewhere. Conversely, if the rate goes down he may claim a reduction from the bank.

479. *Responsibilities of the loan clerk.*—All collateral loans are in charge of a loan clerk. In the great Wall Street banks this is a most responsible position requiring keen and constant vigilance. The loan clerk must keep a sharp watch of the market and he must know what the money market is doing. He must keep an eye constantly on the ticker (as the instrument for reporting quotations of securities is called), in order to see that the margin of all the collateral loans of which he has charge, is properly kept. If there is a sudden slump in the market, if the value of a collateral goes down and the margin is not maintained, he sends immediate notice to the borrower for more collateral.

There are certain periods when the investors have gone out in the market and paid for a large proportion of the securities. Such was the case in 1897 before the boom began under the McKinley Administration. The banks were carrying a very small amount of collateral and the rates were very low.

480. *Undigested securities.*—In a few years the condition changed entirely. The floatations of hundreds of industrial combinations in the period from 1898 to 1903 brought into the market an enormous quantity of new securities. In fact the issues were so fast that the banks were soon filled up to their limit with collateral loans. The Wall Street banks were furnishing the circulating capital on which the new corporations were doing business. The stocks and bonds thus held by the banks were called "undigested securities." The phrase is a happy one expressing as it does the stoppage in the regular process of passing the securities along to

the ultimate investor. The securities which thus failed to move naturally were the cause of a serious disturbance in the financial mechanism. The banks found that they had extended their credit to the utmost and were unable to provide sufficient funds for industrial purposes.

The condition was remedied by the crisis of 1903 which is called the "rich man's" panic. Prices began to decline when the banks began to sell out the collateral of weak holders who were unable to furnish additional margin. The cumulative effect of these forced sales caused a very sharp break in prices, which tempted the investor to enter the market and take away the securities, thus restoring the market to its normal condition and getting it ready for the great boom which culminated in 1907.

481. *Close relation between reserves and prices.*—The credit which the financial bankers of Wall Street extend to the dealers and speculators in securities is based upon cash reserves. The National Bank Act, by permitting the interior banks to deposit half or three-fifths of their cash in the reserve city banks and still count it as reserve, encourages the piling up of cash in these central markets. This process is known as "pyramiding" the reserve. The danger of this method lies in the instability of this cash reserve, which sustains the credit structure of Wall Street. Whenever from any cause the interior banks withdraw their cash deposit the New York banks are forced to contract their credit, which means that they must call some of their demand loans. Some of the speculators will be unable to carry their stock and must sell at whatever price they can get. So close is the relation between all kinds of business in this country that a break in the stock market from the

causes mentioned above is likely to have a very depressing effect throughout the whole country. All of the periods of depression which this country has experienced have been initiated by a panic in Wall Street.

After the panic of 1907 a great many people charged the trouble to the law permitting the pyramiding of reserves. The withdrawal of these reserves was obviously the immediate cause of the panic. The advantages, however, of the re-depositing of reserves in economizing the use of cash are so many that it would probably be wiser to regulate than to abolish the system.

482. *Plan for remedying the danger in redepositing reserves.*—In a recent article the author suggested that the danger of pyramiding might be largely eliminated by dividing the banks in New York City into two classes, commercial and financial.

Commercial banks furnish credit to merchants and manufacturers to be used in the production and movement of goods; the financial banks furnish credit to brokers and dealers to be used in purchasing and holding securities which are deposited as collateral for the loans. The distinguishing feature of the financial bank is the collateral loan. This fact suggests a plan for restricting the resources of the speculator without at the same time placing any burden upon industry and commerce.

483. *Commercial banks.*—Let the national banks in the three central reserve cities—New York, Chicago, and St. Louis—be divided into the two classes, commercial and financial. Leave to the commercial national banks all the privileges they now enjoy under the National Bank Act (except such as hereinafter stated), and in addition permit them to exercise trust company functions, such as acting as trustee, administrator, registrar,

etc.; also give them authority to have savings departments under strict savings bank laws. This concession should be granted to better enable them to compete with the state banks and trust companies. No commercial bank should be allowed to make any loan, or to discount any commercial paper for any broker or any loan secured by the deposit of stocks or bonds, unless such collateral is taken to secure a loan already made, or one the proceeds of which are not to be used in trading upon an exchange. Violations of this prohibition will cause the bank to be classified as a financial bank.

484. *Financial banks.*—A financial bank should have the right to make loans to brokers upon collateral security of stocks and bonds or warehouse receipts. However, they should not be permitted to receive deposits from any other bank or banker or from any trust company. They should not be permitted to issue circulation, but should have the right to deal in bonds and underwrite issues of bonds. Every loan made should be posted in a public place and give the name of the borrower, the amount, the rate of discount, and the name of the security.

No national bank should deposit any of its funds in any other institution except a commercial national bank in a central reserve city or in a national bank in another city.

The foregoing provisions are an attempt to deal with speculation on the basis of present banking laws. It is to be hoped that in the near future all the banks of the country may be incorporated and regulated under one system. Financial conditions can never be thoroughly controlled, nor can the speculative expansion of credit and prices be eliminated, until the state banks and trust companies are made to conform to the requirements laid down for national banks. It is a great anomaly to put strict limitations upon the national banks and expect them to compete with unregulated trust companies; hence, in the provisions above, we have granted to the commercial national banks the functions of trust companies. It were much better, though, to deprive the trust companies of banking functions, which they have acquired, by usurpation, until the states recognize them by statute.[1]

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[1] *Banker's Magazine,* Aug., 1909, p. 192.

CHAPTER XXVIII

BANKS AND THE UNITED STATES TREASURY

485. *Responsibility of the Secretary of the Treasury.*—Few people have any adequate idea of the power and responsibility attaching to the position of Secretary of the United States Treasury. This power and responsibility was not consciously given to the head of the department but exists by reason of the failure of Congress to assume a burden and responsibility which properly belongs to it. Congress, ordinarily so eager to have a hand in every question of importance and so jealous of its prerogative, has in this case backed away timidly from the problem, leaving the Secretary to grapple with it as best he can, handicapped as he is all the while by notoriously inadequate legislation and compelled to take advantage of every little technicality and ambiguity of the statutes in order to save the country from constantly threatening panics.

The average Congressman may know something about the silver question (he had to learn that when the matter was the paramount political issue in 1896), but having gone so far he would be only too willing, if it were possible, to regard as settled the whole intricate and perplexing subject of currency and finance. He realizes that it is a "live" wire and that when it sputters the appropriate thing for him to do is to run. Somebody, however, must take charge of the situation and face the danger of a shock. In the case of the currency problem that man is the Secretary of the Treasury.

The situation which confronts the Secretary is this: The Government is the largest financial institution in the country, its receipts and disbursements together amounting to four or five millions of dollars daily. A large part of these transactions is made in cash, and the daily balance due from or to the New York Clearing House must be settled in cash. It may readily be seen that when the receipts happen to be greatly in excess of the disbursements, the Treasury and Sub-Treasury will have on hand a large surplus of idle currency which has been withdrawn from circulation and from the reserves of the banks.

486. *Treasury causes stringencies.*—There is a certain quantity of currency in the country, consisting of the various government issues and national bank notes. Its amount can be increased or diminished but slowly. The larger percentage of it lies in the Treasury; part is in the bank vaults serving as the basis for credit; the remainder is in the pockets of the people. Should anything happen to increase the amount in use by the people, it must come either from the bank reserves or from the Treasury; if an unusually large amount flows to the Treasury and is not disbursed then the amount in the banks or in circulation is reduced by that much. During the past few years it has frequently happened in the autumn season that both the amount demanded for circulation and the amount lodged in the Treasury have increased suddenly at the expense of the bank reserves, especially those of New York City, causing an acute monetary stringency.

The great bulk of the exchanges of the country is made by means of credit rather than currency. However, the amount of credit available for this use is rigidly limited by the amount of currency which may be employed in bank reserves. If the banking credit of the country is expanded to the limit permitted by law and a portion of the reserve funds is suddenly taken away, the banks must contract credit accordingly, hence the immense importance of the weekly statement of the New York Clearing House banks showing the condition of their reserve. A contraction of credit means a diminution of purchasing power and a weakening demand for everything that is bought and sold, stocks and bonds being especially sensitive to this influence. A sudden withdrawal of cash funds from the New York banks and the immediate contraction of credit which follows when credit is expanded, is likely at any time to become the initial cause of a panic which might spread outward from Wall Street until it involves the whole country.

The Secretary of the Treasury is required to keep in the Treasury or Sub-Treasuries all the cash received by the government, except the receipts from internal revenue, amounting to about $1,000,000 a day, which, before they are "covered" into the Treasury, may be deposited in certain banks designated as United States depositories. As security for these the banks must deposit with the Secretary of the Treasury United States bonds to the full value of the deposit, or other bonds at the discretion of the Secretary.

This, then, is the situation. The prosperity of the country depends to a large extent on the conditions in the financial center. Healthy financial conditions demand stability in the amount of credit available for use in the markets; an increase leads to speculation, while a decrease may lead to dangerous panics. In a word, the whole of our industrial and financial life rests upon the foundation of cash in the New York bank reserves.

There are two ways by which this cash reserve may be interfered with—by withdrawals and shipments West and South during the autumn season when those sections need an unusual quantity of cash money; and by the piling up of surplus funds in the Treasury. By whichever manner the funds are withdrawn the effect is the same.

487. *Defective currency laws.*—The condition above outlined is not inevitable but is the unavoidable consequence of our currency and the treasury laws. We know that the system gives rise to grave dangers which threaten the happiness and well being of every person in the country. Congress refuses to change the law and the law is incapable of meeting the conditions as they arise. The bankers of the country, particularly of New York, are often loudly blamed because they allow such conditions to arise and exist, but among so many, who is there to take the responsibility or has sufficient power to remedy the matter? The banker is conducting a private business for private gain and there is no reason why he should be expected to assume a public function of such magnitude.

488. *Expedients of the secretary.*—The responsibility falls, therefore, upon the Secretary of the Treasury. He is given specific discretionary powers in enforcing the laws and out of these certain expedients have been devised which may be used under certain conditions:

1. The secretary has induced national banks in one way or another to take out notes in advance of their actual needs.

2. He has anticipated the payment of interest on

United States bonds in order to put cash into circulation.

3. He has made purchases of United States bonds for the same purpose.

4. He has made a ruling that the banks need not keep a reserve against government deposits. The New York Clearing House Association, however, continues to enforce its reserve requirements against members, so that the effect of the ruling, so far as it concerns the New York banks, is nullified.

5. He has allowed the government depository banks to substitute county, city, state, and other bonds, including, it is understood, some railway bonds, in the place of United States bonds as security for public deposits. This privilege was extended only to such banks as would agree to use the United States bonds thus released for taking out additional circulation.

6. He has warned the depository banks to abstain from using their funds in Wall Street as a basis for call loans to speculators through brokers.

7. He has entered into the foreign exchange market to assist the gold importing movement by giving the banks temporary deposits of gold equal to the amount they engage for import from abroad. This removes the advantage under which our importing bankers labor—that of losing interest during the time the gold is in transit—and to a considerable extent stimulates gold imports.

CHAPTER XXIX

EUROPEAN BANKING SYSTEMS

489. *Bank of England.*—The Bank of England owes its origin to conditions similar to those which obtained in the United States when the Bank of North America was founded. It was established in 1694 for the purpose chiefly of assisting the fiscal operations of the government. On account of the war with France the government was badly in need of money. Taxes of all sorts had been levied but it was very difficult for the government to borrow because of the confiscation in 1672 of funds borrowed in like manner by Charles II. Although this sum, amounting to £1,300,000 had finally been paid, bankers and individuals of wealth were still very cautious about making advances to the government.

The original charter of the Bank of England provided that it should be given the power to issue notes, to deal in coin, bullion, and commercial bills, and to make advances on goods and merchandise; these powers being contingent upon a loan to the government of £1,200,000 for which the bank was paid 8 per cent interest. From its ability to issue notes the bank found itself in possession of an equal amount of currency which it was at liberty to loan. These notes were not payable to bearer, hence passed only by endorsement. They were payable at specified dates and bore interest. In 1697 the capital of the bank was increased, a further loan made to the government, and the bank was given the right to issue demand notes without interest.

In 1709 an attempt was made to give to the Bank of England a monopoly of the banking business by providing that no corporation or partnership composed of more than six persons should be given the power to issue circulating notes. The issue of notes at that time was supposed to cover the entire field of banking, hence this provision was understood as prohibiting any organization of more than six persons from engaging in banking in any form. It is obvious that this did not prohibit the issue of notes by individuals or corporations of less than six persons; nor did it prohibit the operations of banks of deposit by large organizations. This fact was not understood for many years, however, and with the exception of small institutions the Bank of England enjoyed a monopoly of the entire field of banking. The effect of this monopoly was not felt at first, but with the general development of commerce which took place in the latter part of the eighteenth century a demand for credit instruments appeared which the Bank of England could not meet. There sprang up accordingly a vast amount of small but weak banks, whose notes soon flooded the country. They were issued for the most part in small amounts, and in 1777 a successful attempt was made to drive them out of circulation by prohibiting the issue of notes in denominations smaller than £5.

190. *Development of the use of checks.*—Mr. Conant in his "History of Modern Banks of Issue" says:

> The prohibition upon note issues was probably one of the causes which contributed to the use of checks. The notes issued by private bankers were at first written on paper for any odd sum, like promissory notes. The practice was introduced by

Child & Co. in 1729 of having the notes partly printed and partly written, like a modern check. These notes continued to be issued till about 1793, when the existing system was introduced, of giving the depositor a credit for the full amount of his deposit and authorizing him to draw checks at his convenience against it. The issue of notes by private bankers was not forbidden until the Bank Act of 1844, but their use gradually diminished as the greater convenience of checks came to be understood.

The intimate relation between the Bank of England and the government, which had been established at the outset, continued as time passed. The charter was renewed from time to time, usually on the condition of additional loans to the government. The war against Napoleon was financed largely by the Bank of England, Mr. Pitt drawing heavily upon the bank for money which was sent to the Continent to promote the war. These drains of specie continued unabated until the bank was forced to suspend specie payment in 1797. The suspension, or restriction as it was called, continued until 1821.

During the earlier part of this period the Bank of England was able to keep its notes circulating at par with coin. The act of 1797 had made them legal tender. Finally, however, depreciation began, and during the boom which followed the panic of 1810 assumed considerable proportions. In that year a committee was appointed by Parliament to investigate the financial and monetary situation, and a report known as the Bullion Report was the result. In this report the real evils of the situation were ably expounded, and recommendations made which if adopted promptly would have restored the currency to a stable value. It served, however, to educate the minds of bankers and public men to an understanding of the problems involved, an education which bore fruit a few years later.

In 1821 Parliament authorized a return to a specie basis, and as the bank had already accumulated a large mount of gold, resumption speedily became a fact. At the same time the government's power to borrow from the bank was restricted so that no further loans could be made without special authority from Parliament.

In 1823 it was discovered that the Bank of England had not been given a monopoly of banking except in its note issue function. There followed accordingly a movement to establish joint stock banks of deposit. This had little direct effect, as no banks were immediately established, but it resulted in certain concessions from the Bank of England. In 1826 the bank consented to the establishment of joint stock banks of issue at a distance of more than sixty-five miles from London. In 1833 joint stock banks were authorized in London and vicinity but they were not given the right of issue.

In 1833 an act was passed by Parliament which made the notes of the Bank of England legal tender as long as they were being redeemed in gold at the bank. The notes had been legal tender prior to this act but only during the restriction period.

491. *Bank Act of 1844.*—During the years which followed the establishment of joint stock banks of issue seventy-two such banks were organized and note issues increased. In 1836 and again in 1839 panics occurred and it was popularly thought that they were caused by an excessive issue of notes. The result was an agitation which terminated in the Bank Act of 1844. The charter of the Bank of England was before Parliament for renewal. The new charter provided for the entire sepa-

ration of the banking and issue departments. The bank was ordered to deposit with the issue department £14,000,000 of government securities, which represented the average amount of circulation then outstanding. This deposit included the government's debt to the bank, which amounted to £11,015,100. In return the bank received an equivalent amount of notes. Further notes could be issued only after a deposit of gold coin or bullion with the issue department, the right of deposit being open to anyone. Joint stock banks of issue were allowed to continue issuing notes, but if they retired their circulation it could not again be issued. In order that this might not cause a contraction of the currency the Bank of England was given the right to increase its deposit of bonds and the notes which it would obtain for them to the amount of two-thirds of the circulation retired by the joint stock banks.

By this act the character of the bank note was changed entirely. Formerly it had been a credit instrument, depending for its current redemption upon the reserve of the bank and for its ultimate redemption upon the bank's general assets, the bonds, notes, etc., for which it had been exchanged. Its volume expanded and contracted with the demand for medium of exchange. That its excessive issue could have caused the panics of 1836 and 1839 is inconceivable. The bank act converted it into a gold certificate—a mere warehouse receipt for gold—destroying entirely its credit character. Its volume can expand now only after a deposit of an equivalent amount of gold, hence the only economy the system attains is in the greater convenience of paper money.

492. *Character of Bank of England note.*—The bank act was followed by a considerable increase of deposit

banking. Hence its inelasticity was not felt until the panic of 1847. In that year, and again in the panics of 1857 and 1866, the demand on the bank for notes was so great that the government suspended the bank act and allowed the bank to issue notes based on its general assets. The rate of interest at which the bank could loan its notes was fixed in 1857 at 8 per cent, and in 1866 at 10 per cent, and the interest was to be credited to the government's account, so that the bank would not increase its loans unnecessarily with the idea of making large profits for itself. In this suspension system, lies the only elasticity of the English plan of note issue. It has had the desired effect in the panics in which it has been used, but because it depends upon the consent of Parliament it is a dangerous device to rely upon.

493. *The Bank of England private.*—The Bank of England has always remained a private corporation, bent upon earning profits for its stockholders. It is managed, however, in the interests of the whole country, and its management has always been so efficient and unselfish that many people are under the impression that it is a government institution. It still greatly assists the fiscal operations of the government by managing the public debt, receiving government revenues, and making various payments, but over these functions the government has no direct control except when its contracts with the bank expire.

With the growth of deposit banking, the resultant increase of joint stock banks of deposit and restriction upon note issue, the Bank of England has become chiefly a bankers' bank. It is not governed by bankers but bankers are its customers. In fact the charter provides that bankers shall not be elected to the board of directors, and the board is composed largely of merchants. Its chief usefulness to bankers is as a depository of their cash reserves and as a bank of re-discount.

There are no laws in England compelling banks to keep cash reserves, their size being left entirely to the judgment of the managers. The banks throughout England find it much more convenient to deposit their cash in the Bank of England. No interest is paid on these deposits but the banks continue to make them because of the right it gives them to draw on the city banks. The result of this system of concentrating the cash in one bank is to place upon the Bank of England the responsibility of holding the cash funds of the entire country not in active circulation. When there is an extraordinary demand for any reason, such as withdrawal of deposits by individuals and firms in time of panic, that demand is transmitted from one bank to another until it finally reaches the Bank of England. For this reason the Bank of England must keep itself in a position to finance such occurrences, and it does so by keeping a large cash reserve. It has learned from experience that a 40 per cent reserve is sufficient, and this it aims to keep at all times. Its device for keeping its reserve intact is the discount rate. It selects the most urgent cases for relief automatically by raising the rate at which it will discount paper. This immediately restricts loans. When the reserve piles up in excess of what is needed the bank encourages loans by lowering the rate. This is the principle upon which loans are made to the world over, but because of the importance of the Bank of England its discount rate is watched carefully, even in this country, as a barometer of financial conditions.

494. *Banking in France.*—The earliest attempt to

establish a central bank of issue in France was made by John Law in 1716. The bank was well conceived and for a time was ably managed, but it finally became involved with Law's speculative schemes and went into liquidation in 1721. The panic which marked the end of Law's career was so severe that for fifty years there was no further attempt to establish a great national bank. In 1776 the Bank of Commercial Discount was organized only to receive its death blow at the hands of the government in 1789. During its brief existence it was well managed and gave excellent service. The government, however, found that its own credit was unstable, and in an effort to repair it dragged the bank down with it. The climax occurred when the government ordered the bank to pay into the Treasury a large sum in notes in return for worthless assignats. In 1793 the bank went into liquidation.

495. *Bank of France.*—The Bank of France was founded by Napoleon in 1800 with a capital of 30,000,000 francs. At the outset it had no special privileges in regard of the issue of notes, nor was it a government institution in any sense. In 1803 the capital was raised to 45,000,000 francs, and it was given the exclusive right of issue in Paris. In 1806 the capital was further increased to 90,000,000 francs and the present system of government was adopted.

Under this system a governor and two deputy governors are appointed by the state. These officials must be stockholders. There is also a board of fifteen regents chosen by the stockholders, but the governor presides over this board and has general supervision of loans and all bank affairs.

In 1808 the bank was given the exclusive right of note issue in all towns in which it had branches. During the years following the fall of Napoleon its influence waned somewhat in favor of the establishment of departmental banks. A large number of these were established between 1830 and 1840 as the result of the belief that the Bank of France was not properly organized to administer the banking affairs of the average citizen. It was popularly believed to be a bankers' bank. The growth of the departmental banks soon resulted in a spirited contest with the Bank of France, the main point at issue being whether the privilege of note issue should be confined to the one bank or bestowed upon all. The final result was the Act of 1848 which gave to the Bank of France a monopoly of the note issue function. It was required, however, that the bank should buy out the departmental banks of issue, which it promptly did by increasing its own capital stock.

C

496. *Deposit currency little used.*—The monopoly of the note issue function did not result in building up great banks of deposit in France as it did in England. One of the most interesting features of the French system is the undeveloped condition of the deposit currency. Notes are used almost entirely in large transactions as well as in the channels of small trade. The confinement of the privilege of note issue to the one great institution has given to France a uniform, stable currency against which there is little complaint and because of which there seems to be no necessity for the growth of deposit banking.

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497. *Asset currency.*—The notes of the Bank of France are issued on what is known as the banking or "asset currency" plan. In other words, there is no specific fund set aside for their redemption, such as is provided by the English law and by the National Bank Act

of the United States. The volume of notes outstanding is fixed solely by the needs of business and by the cash reserves which the bank thinks it necessary to keep to redeem the notes. Under this plan bank notes are treated just as deposits are treated in national banking law—as demand obligations of the bank against the redemption of which a reasonable cash reserve should be kept.

In practice the amount of notes against which an equivalent amount of cash is not held is relatively small. Although the Bank of France is not required to provide any specific reserve it has found it advisable to keep a very large one, much larger than we consider necessary in this country. The reserve of the Bank of France will average about 60 per cent of its circulation in gold and silver coin.

D

498. *Branches.*—The bank is required to maintain one branch in every department in France. Each branch is allotted a certain amount of the capital, and the law requires that half the capital shall be held locally. The total capital is at present 180,000,000 francs, or approximately $36,000,000. Loans are made by the branches as well as at the central institution, and at the same rate of interest. It is worthy of note that the bank often loans in very small sums, running down to a few francs. The bank also does a large amount of re-discounting, the small institutions throughout France accepting paper with the intention of passing it on at a small profit to the central bank.

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It is obvious that the Bank of France represents a theory of banking which contrasts strikingly with that upon which the Bank of England is conducted. The Bank of England issues notes only against the actual deposit of gold with the issue department; the Bank of France issues them without any restriction whatever except those imposed by its own conservatism. It is evident that the later method, although it may not appear on its face to be as safe, gives to the currency the much needed attribute of elasticity. The English system is notably inelastic. The volume of outstanding notes can be increased only by the purchase and deposit of gold, a method both slow and expensive. As we have seen, the rigidity of the system has caused the growth of the deposit currency, the bank note losing entirely its true function as a credit instrument. England's only resource in time of acute stringency is the suspension of the bank act, which in itself is an admission that the system is incorrect in principle. In France unrestricted issue has allowed the bank note to retain its true character and its importance as a medium of exchange. The system is elastic, the volume of the circulation expanding and contracting as the demand for it changes. Although there are no reserve requirements the same result has been accomplished by conservative management, so that the note of the Bank of France has become as readily acceptable as the Bank of England's gold certificate.

The question as to which is the better system, however, cannot be considered here because it goes far beneath the merits of the two plans of note issue. In final analysis it would be found to depend upon which system—that of performing exchanges with bank notes or with the deposit currency—would be most economical and best suited to the needs of a given country. Even then final decision of the question must be largely of academic value, for the century-long habits of nations cannot be readily changed. A knowledge of the underlying principles, however, setting forth the two great schools of banking, is extremely valuable to anyone who is interested in the unsettled banking problems of the United States. France and England have each given to the world splendid examples of conservative, upright banking which stand as monuments to the ability of their citizens to conduct private enterprises in the interests of the public welfare.

499. *Imperial Bank of Germany.*—The Imperial Bank of Germany, or Reichsbank, was founded in 1875. Its organization was one of the measures adopted by Bismarck to bring order out of the monetary chaos that had existed in the German states prior to the unification of the empire. Together with other monetary and banking reforms it was made possible largely by the huge war indemnity of $1,000,000,000 which Germany collected from France. In 1873 the gold standard was adopted, and the mark made the unit of value in place of the thaler.

The Imperial Bank was organized upon the foundations of the Bank of Prussia, established a century earlier. This bank was owned privately but was controlled by the Prussian Government. The Imperial Government purchased the Prussian interest, raised the capital from 20,000,000 thalers to 120,000,000 marks, and sold the stock to private interests.

500. *Influence of government.*—Although the government is not a stockholder it exercises direct control over the bank's affairs, so that it is much more essentially a government institution than are the banks of England and France. The Chancellor of the Empire is the governing officer. Associated with him are four directors, one named by the Emperor, and the others by the Federal Council. The stockholders elect annually a commission of fifteen members which acts in an

advisory capacity but has no real control of the bank's affairs.

The bank acts as fiscal agent for the government without pay; and furthermore, the stockholders share the profits with the government. First, a dividend of 3½ per cent is paid to the stockholders; second, one-fifth of the balance goes into the bank's surplus; third, the stockholders and the government then share equally until the stockholders have received 8 per cent, after which the government receives the remainder.

501. *Modeled on Bank of England.*—The regulations in regard to the issue of notes were modeled upon the laws of England with certain modifications which have been very useful. The Reichsbank was given a circulation of 250,000,000 marks, with the further provision that when other note-issuing banks (of which there were then thirty-two) gave up the privilege, the Reichsbank might increase its issue in like amount. At present only six banks still issue notes, so that the circulation of the Reichsbank has been considerably increased. Its capital was increased in 1905 to 180,000,000 marks, and it now has 320 branches.

502. *Reserves.*—The Reichsbank is required to keep a cash reserve of one-third of its circulation, two-thirds being secured by first-class commercial paper maturing within ninety days. It is evident that this provision renders the currency much more elastic than that of England where the cash reserve must be 100 per cent. Furthermore, the Reichsbank is entitled to exceed the limit set for the amount of notes it can issue by paying a tax of 5 per cent per annum upon all circulation above the maximum limit. This creates a circulation that can be used in emergencies without the necessity of suspending the limit by special enactment, as Eng-

land is compelled to do. This plan has been incorporated into a number of the systems which have been suggested for adoption in the United States.

It is worthy of note that no special fund is set aside for bank note redemption. In case of dissolution the depositors and note holders would be in the same position. The deposit currency, however, has not grown greatly in Germany, so that the note holders would always be the chief creditors. The system has worked out very well in practice. The notes have always circulated freely and without discount. The bank has followed the precedent of the Bank of England and the Bank of France, and conducts its affairs on a very conservative basis, maintaining, like the Bank of France, an average reserve of 60 per cent of its circulation. In its conservatism it is very like both its predecessors; in its plan of note issue it seems to have taken a middle ground between the two older schools, adopting many of the good points of each; but in its management it has departed entirely from the other institutions in that its control is entirely in the hands of the Imperial Government.

CHAPTER XXX

CANADIAN BANKING SYSTEM

503. *The bank and the government.*—The banking system of the Dominion of Canada is so often held up by the advocates of asset currency and branch banking as a model for the United States to follow that it is well to understand thoroughly the details of the system. It is likely that banking features which prove excellent in Canada may not be adapted to conditions in this country.

The Canadian system is composed of thirty-four large joint stock commercial and industrial banks, privately owned and managed but working under a uniform law and subject to the supervision of the Dominion Government. No bank is chartered by the government with a capital of less than $500,000. This renders it impossible for new banks, unless they are sure of a very great volume of business from the start, to be established. The thirty-four central banks have many branches, 690 in all, scattered over the Dominion. Banking is extended, not by the establishment of new banks but by increasing the branches, together with the capital resources of the existing banks. The Canadian Banking Act is revised every ten years, at which time all the bank charters are renewed.

504. *Security of note issues.*—The banks have the exclusive privilege of issuing bank notes of the denomination of $5 and multiples thereof. These are not legal

tender. The small paper money is provided by the government. The bank notes are secured, first, by the double liability of the shareholders; second, by a first lien of the note holders upon the assets of the bank; third, by the bank circulation redemption fund; fourth, by 6 per cent interest accruing upon the notes of failed banks from the date of refusal to redeem to the date when readiness to redeem is announced.

The banks may issue notes without the deposit of bonds or without any restriction except those already mentioned. The amount is limited by the capital of the bank. The double liability of the shareholders and the first lien of the note holders upon the assets of the failed bank are similar to our own national bank act.

505. *Redemption fund.*—The bank circulation redemption fund is held by the Minister of Finance and draws 3 per cent interest. It is maintained out of contributions by the banks and must always equal 5 per cent of their average annual circulation. It is especially set apart for the payment of notes of failed banks. No payments have been made from the fund since 1891. If the fund becomes impaired the banks may be called upon to contribute not to exceed 1 per cent of their circulation of the preceding year.

Notwithstanding their preference as to assets, before 1890 the notes of failed banks sometimes sank to less than fifty cents on the dollar before they were ultimately redeemed at par. The provision by which they yield 6 per cent interest holds them at par pending their redemption, for the reason that they become a very desirable investment for the other banks.

Regarding redemption the law requires: "The banks shall make such arrangements as are necessary to insure the circulation at par in any and every part of

Canada, of all the notes issued or reissued by them and intended for circulation; and towards this purpose the bank shall establish agencies for the redemption and payment of its notes at the cities of Halifax, St. John, Charlottestown, Montreal, Winnipeg, and Victoria, and at such other places as are from time to time designated by the Treasury Board."

Each bank is anxious to keep out as many of its own notes as possible; hence it pays out only its own notes and sends in for redemption the notes of other banks as fast as they are received by it. Bank notes are redeemed in exactly the same way as checks are collected. Wherever there are clearing houses the notes appear in the collections the same as checks. Sometimes in the height of the crop-moving season some of the banks reach the limit of their own power of issue and may then pay out the notes of competitors, but as soon as the strain relaxes the safeguard resumes its normal function of limiting the volume of circulating medium to the actual needs of business at the moment.

506. *System very elastic.*—The greatest virtue of the Canadian bank note currency is elasticity. It adapts itself very easily to the needs of business. The effect of this is to keep interest rates from fluctuating so widely, as with us, and to relieve the business men of the apprehension that periods of stringency may come when they will be unable to borrow money at all, a condition which frequently occurs in the United States. Inelasticity is the distinguishing feature of our currency system, and the great obstacle to any change is the fear that the notes will become less secure.

507. *Reserves.*—The Canadian law makes no requirements of the banks for the keeping of a minimum reserve. The question is one which has excited wide

discussion in Canada but the weight of argument seems to be on the side of those who think that a reserve requirement does more injury than benefit to the community. Our reserve requirements have been compared by a Chicago banker to certain beds in a hospital kept for emergencies; on the occasion of a great disaster in the vicinity of the hospital the superintendent refused to permit the beds to be used, saying that they were to be reserved for emergencies. The necessity of maintaining the legal reserve renders our banks helpless at a time when they should be loaning freely in order to allay the incipient panic. A reserve which cannot be used is of no avail in emergencies. Business prudence has in fact led the Canadian banks to maintain reserves which have always been adequate, and they have even been able to loan funds in the United States when the banks of this country were unable to extend sufficient accommodation.

508. *Branch banking.*—The advantages of branch banking are:

1. Large capital behind each institution. No matter how small the branch the customers share in the security which a large capital offers.

2. Unity of policy on the part of the leading banks during a stringency, in contrast to the playing at cross purposes which, in the panic of 1893, distinguished the action of the national banks in the central reserve cities of the United States against the smaller country banks. In 1907, if the country banks had been branches of the large city banks, they would not have withdrawn funds from those banks when they were so badly needed, and the crisis would not have been so severe.

3. Power to equip every branch with ample reserves for maintaining commercial credit by means of note

issues. It is impossible in Canada for the business needs of any community, no matter how remote, to outstrip the banking facilities, as is often the case with us. The resources of the branch bank are quickly and indefinitely extended. Moreover, when the need for additional facilities has passed the business of the bank can contract accordingly without loss to any one.

4. Uniformity of interest rates throughout the whole country which do not vary more than 1 or 2 per cent between the large city banks and the frontier points. In the absence of competition the necessity of depending upon small local banks for accommodation requires the business men of western towns in the United States to pay monopoly rates for the use of capital.

5. Expert supervision by the central office prevents bad banking. The board of directors of the large banks are responsible as well for all the branches and they are therefore forced to put into practice a method of examination and supervision which is much more effective than our government examination.

6. Branches can be maintained in localities where the profit of the business would not justify the establishment of a separate bank with independent capital. The city banks can establish branches without any investment in additional capital. Branches can be established where the business is so small as to justify simply the employment of one clerk in a rented office.

509. *Canadian system in actual operation.*—We turn now to the manner in which all this machinery is applied to moving the crops.[1]

"The greatest grain-producing district of Canada is the far inland section which forms the Provinces of Manitoba, Saskatchewan, and Alberta. The larger part of the Canadian crop finds a market abroad and has to be transported to the Atlantic seaboard. In the case of grain grown in Ontario or the eastern provinces this is not a difficult matter, for the distance is shorter and the means of communication numerous. But between the provinces we have mentioned and the seaboard the only links of communication are one or two vast stretches of single track railroad supplemented by water communication from the head of the Great Lakes. But navigation usually closes in these northern waters during November, and the period between the harvesting of the crop and the close of navigation, after allowance is made for the time consumed in threshing and marketing the grain, is all too short. Hence the rush to ship which takes place in the fall of each year, and hence, too, the immense storage elevators which have sprung up at the lake ports of Port Arthur and Fort William at the head of navigation. Once these water outlets are closed there is nothing left but the long and expensive railroad haul.

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[1] *Banker's Magazine,* June, 1906,

510. *Moving the crops.*—"Long before the movement of the crops is due the banks make arrangements to accumulate large supplies of notes at convenient points, Winnipeg being naturally the chief center for this purpose. It is at Winnipeg that the large milling and elevator companies which handle most of the grain crops have their headquarters, and it is the Winnipeg branches of the banks which are most conveniently situated to replenish the tills of the country branches and to provide funds for the country storekeepers who cash the grain tickets issued by the wheat buyers. Scattered along the railroad lines in the west at the little way-stations are the tall buildings of the grain elevators, and here are to be found the buyers for the Winnipeg grain

firms. To these the farmer brings his wheat, receives a voucher called a grain ticket specifying the weight of the grain he has sold and the price to be paid for it. These tickets are cashed at the local banks or, if there is no bank, by the country storekeepers, arrangements for supplying the latter with notes for this purpose having been made by the companies in Winnipeg. Checks are seldom used in transactions of this kind with the farming community. At this season of the year the business of a country branch bank even in very small places will be very active, and large sums are daily paid out over the counters.

511. *Grain as security.*—"The Canadian banks are specially empowered under the bank act to acquire warehouse receipts and bills of lading as collateral security and to lend money to wholesale shippers of or purchasers of or dealers in agricultural products upon the security of such products. So the banks readily make advances to the grain dealers on the security of the grain in their possession. Then when it is shipped by the wholesale dealer the advances are retired by drafts on the purchasers with bills of lading attached. If the grain is to be exported the bill of lading is usually replaced at the port of shipment by an ocean bill of lading, which is in its turn attached to a bill of exchange on the foreign dealer. This exchange is then purchased by the bank, the previous drafts having been retired, and forwarded to its correspondents abroad. The bank finally receives credit for the proceeds in London or some other European center.

"By this time the bank notes originally issued for the purchase of grain have come in for redemption, and the issuing bank, to obtain funds to meet its clearing-house settlements, will be forced to sell sterling or New York funds or else to import gold. As the balance of trade between Canada and the United States, most of which is finally discharged in New York, is against Canada, there is a fairly steady demand for New York funds in the financial centers, and there will usually be found some bank willing to buy. But as the proceeds of the grain shipments are still in Europe, the selling bank will provide cover for its drawings on New York by selling sterling or other foreign exchange on that market against the credit balances acquired abroad by means of the bills of exchange drawn against the shipments of the very grain for the purchase of which in the first place its notes were issued. If gold is imported the resulting transactions are very similar, as New York is the point from which it is usually obtained. In this connection it is interesting to note that some of the Canadian banks are among the largest dealers in foreign exchange in New York, where the credit of their bills is unexcelled. So extensive are these foreign transactions that several of the Canadian banks maintain their own offices in New York, and even in London, for the purpose of looking after their own interests at these points."

512. *Fluctuations in note circulation.*—We have now traced the series of transactions involved in the issue of bank notes for the purchase of grain up to the redemption of these notes in Canada and the final liquidation of the whole matter in New York and London. Bearing in mind what has been said as to the shortness of the season for marketing the grain of the vast fields of the West, it will be readily understood that tremendous fluctuations in the volume of the bank note currency take place in the course of a short period. The redemption of the notes issued to pay for the crops is

completed in January of each year, and this month marks the lowest level of the year. There is a second slight dip during the spring and a third culminating about midsummer.

For thirty years prior to 1896 the lowest point of the year had been reached regularly in May or June, but since that date it has with equal regularity been transferred to January. In 1905, however, the difference in level between January and May was very slight, the note circulation dropping to $58,021,000 in January and to $58,136,000 in May.

January is a month usually marked by a lull in business. The holiday trade is over, winter has set in steadily, and some outdoor occupations are suspended for a time, while the majority of business men, in both wholesale and retail trade, are taking stock. As winter wears on business becomes much more active and the note circulation rises for a time, to experience a slight fall in the early spring when many factories shut down for repairs, lumber camps close and the men are discharged, and other winter employments come to an end. It resumes the upward course as summer occupations begin again, navigation on the Great Lakes reopens, and general business gets into full swing. Midsummer brings a slight falling off, as might be expected, but soon the heavier movement of farm produce begins and the note circulation at once responds. The rise is somewhat gradual at first, but as cattle buyers, owners of cheese factories, and finally grain buyers look to the banks for notes with which to pay the farmers, it increases in velocity. Now the volume of the circulation begins to mount by leaps and bounds, reaching its height at the end of October or the beginning of November when every nerve is being strained to hurry as much as possible of the western crops to market and to the seaboard before navigation closes on the inland waterways. The period of rapid expansion covers the three months August, September, and October, and probably part of November as the exact figures are only available at the end of each month. During this period the increase in volume has ranged of late years from 20 per cent to 35 per cent, according to the size of the crop to be marketed. A period of contraction, even a little more rapid than the expansion, now follows and lasts till the end of January, when the lowest level of the next year is reached.

CHAPTER XXXI

SUMMARY OF CURRENCY AND BANKING PRINCIPLES

513. *Elasticity.*—The following principles should be observed in making any change in our currency and banking system. They are deductions drawn from the history of banking both of this country and abroad, from a comparative study of the systems of the leading civilized countries, and from a general study of economic theory.

The currency of a country should always be so adjusted to the demand for it that fluctuations of prices due to changing quantities of currency may be reduced to the minimum. A currency which is too inelastic to respond to changes in demand, especially seasonal demands, or the quantity of which is subject to changes independent of changes in demand, is defective.

2. A currency which in any way increases the amount of speculation is defective.

Our currency is elastic but its elasticity is not responsive to the demands of business. Gold is the only element which expands and contracts rationally. Silver certificates and greenbacks are inelastic. National bank notes expand and contract with the price of bonds and not with demand; they change too slowly.

The deposit currency is elastic, but is subject to sudden and enormous fluctuations in amount which have a profound effect on prices and business. This is due to defects in the cash currency, to reserve laws, to our sub-treasury system, and to the danger of "runs" on banks. Any reform in banking and currency should tend to bring the deposit currency into conformity with Principles 1 and 2.

514. *United States currency.*—3. Any currency which encourages the perpetuation of the national debt or of state or municipal debts is defective. Governments should be as free from debt as possible so that they may be strong in emergencies. Bank currency should be as independent of the fortunes of the government as possible, so as to be a support rather than a burden in time of stress.

This principle is violated in the National Bank Act and in the Aldrich bill. They both give artificial values to bonds and create vested rights which make it difficult to change the system.

4. The government is not a proper agent to issue and keep outstanding demand obligations which circulate as money. Such obligations embarrass the government in emergencies, impair its credit at the most inopportune time, and interfere with the financial operations of the government.

515. *Sub-treasury system.*—5. The fiscal operations of the government should interfere as little as possible with the quantity of currency in circulation. The sub-treasury system withdraws from circulation large sums which must be restored by the Secretary of the Treasury as government deposits. Too much responsibility is placed on this official, and banks are likely to be drawn into politics. A central bank acting as fiscal agent of the government would obviate this defect. The Fowler bill would force the banks to pay interest on these deposits and eliminate the bond-deposit requirement, thus

securing an automatic and natural distribution of the government deposits.

516. *Reserves.*—6. Credit should not be permitted to expand out of proportion to reserves held for liquidation. Reserves should be available for liquidation wherever the demand appears. Prompt liquidation may stop an incipient panic. Reserve requirements should be flexible enough to meet emergencies but not so flexible as to encourage speculation.

7. Credit in any form should never be used as reserve, since a weakness in the foundation may cause a collapse of the superstructure. The Fowler bill providing that reserves shall be kept in gold is sound. A grave defect in our system is the state banks and trust companies with too small reserves or reserves in the form of national bank credit.

8. All forms of demand credit, bank notes, or deposit currency should be protected by reserves.

9. The best banking system is one in which the cash reserve is most effective in performing its function. A small reserve capable of quick mobilization at the place where demand for liquidation in cash threatens is more effective than a large one which is immobile or which is segregated in times of panic. A centralized banking system increases the effectiveness of the reserve. In this respect the English and Canadian systems are far superior to the American. Our reserves are drawn into the money centers to increase speculation and leave when the need for them arises.

10. A stringency arising because expansion of credit has reached its limit in relation to the existing reserve is wholesome and natural, but it is a critical moment in finance. The reserves must be maintained to avoid a

sudden contraction of credit followed by wholesale liquidation and panic.

12. Cash should leave the banks only in response to a legitimate demand for it. The only legitimate demand is for circulation or settlement of foreign balances. Hoarding by individuals, the government, or country banks is preventable.

517. *Guarantee of deposits.*—13. Guarantee of bank deposits will prevent hoarding by individuals and banks. It is advocated, not to protect depositors, but to protect reserves and prevent sudden and unnecessary contraction.

14. Guarantee of bank deposits must not encourage unsound and speculative banking. It must not protect an insolvent bank from failure and permit it to continue its career, growing more and more involved all the time. There must be some power to close an insolvent bank before the shrinkage of assets exhausts the surplus and capital.

15. The loss from bank failures should fall on the men responsible for them as far as possible. Hence the directors should bear the loss whenever such loss has been incurred either through their negligence or culpability.

16. Whenever the banks are required to contribute to a fund to pay the losses of depositors in a bank failure, they should be given power to prevent such failure. Banks should be mutually responsible only in a small district. It would be absurd to make the banks of Maine liable for bad banking in California. The banks of Illinois, however, might very properly be responsible for each other if they were empowered to check bad banking among themselves; then failure and loss could

occur only through negligence on their part and they themselves would be to blame.

17. Depositors of a failed bank should be paid at once from a fund. The most serious results from failure of banks is the delay in payment rather than in final loss; both are absolutely unnecessary and the fear that such delay and loss might occur cost the country hundreds of millions of dollars in 1907. No form of emergency currency would have prevented this.

18. Where the law has been violated or where failures have been caused by loans to directors or to corporations or firms in which they have been interested, the directors should be personally liable, because they are responsible and can easily avoid liability. The shareholders can be prevented from electing irresponsible directors by making them liable, above their double liability already existing, for any deficit after the directors' liability has been exhausted.

19. Practically no bank failures have caused any loss to depositors in which the directors have not permitted, negligently or culpably, the violation of law or a gross violation of their trust in loaning the funds of the bank to themselves.

518. *State banks and trust companies.*—20. A great obstacle to a thorough reform of the currency is the existence of the state banks and trust companies, which are exempt from all regulation by the National Bank Act. Though deprived of the right to issue bank notes, these banks have a power (unlimited in some states) to increase the deposit currency at will. They may count national bank notes as part of their reserve, thus making a true asset currency impossible or dangerous. Trust companies, especially, compete unfairly with national

banks and then expect the latter to support them in times of emergency. National banks should be permitted to have savings and trust departments subject to laws as thorough as the Massachusetts or New York laws. Any measure such as the guarantee of deposits or other privileges would tend to induce state institutions to change to national, and this is desirable. The decentralized national banking system is bad enough but when to that is added the state systems, entirely disconnected from and competing with the national system, the prospect of harmonious action of all banks for their common good is small.

519. *Unity of action.*—21. Any tendency toward unity of action on the part of the banks is good. A central bank, strong enough to control the situation at all times and patriotic enough to sacrifice present profit for the general benefit of the whole business community, is the ideal plan. Any plan for unifying the banks into clearing house associations is a step in this direction.

22. A clearing house for clearing country checks would effect an enormous economy in collections and would assist in unifying the banks.

23. Branch banking is desirable because it economizes reserves and capital, affords banking facilities to communities now unable to support a bank, and would enable the borrower, say in Texas, to get a loan at as low a rate (security being the same) as the business man, say in Chicago, the benefit of which would shift to the seller of cotton and other products and the consumer of goods.

24. It is possible to prevent a centralized banking system from being exploited by speculative interests through restrictions as to stockholders, directors and

officers. "Put your eggs in one basket and then watch the basket."

25. There should be an institution strong enough in credit and resources to be ready at all times to re-discount good commercial paper. The United States will never be a great international money market until good paper can be discounted at any time at less than 8 per cent. Many really solvent banks have failed because they were unable to convert their assets into cash at any rate. Such failures are absolutely unnecessary and introduce a needless risk into the banking business.

520. *Speculation.*—26. Exchange is of two sorts: necessary trading and speculation. Necessary trading is buying and selling of property the purpose of which is to increase the utility of the property: the motive for such exchange being the profit arising out of the increased utility of the property. The merchant increases the utility of goods by getting them one step nearer the consumer to whom they have the highest utility. The broker increases the utility of stocks and bonds by passing them along to the investor.

Speculation is exchange, the purpose of which is a profit arising out of an increase in value not due to an increase in utility but to market fluctuations. Speculative exchanges do not get the property any nearer its final destination in the economic process.

Speculation is of two sorts: Legitimate and illegitimate. The function of legitimate speculation is to equalize supply and adapt it to demand, thus decreasing fluctuations of price and avoiding sudden changes. Such trading requires full knowledge of the conditions of supply and demand.

Illegitimate speculation tends to increase fluctuations of price, either through trading in ignorance of conditions of supply and demand (gambling), or by manipulating the market and causing temporary changes not justified by supply and demand.

27. Illegitimate speculation is an unmitigated evil and is responsible for a large economic loss to the country. It creates panics and causes unnecessary industrial stagnation.

28. In attempting to eradicate illegitimate speculation care must be taken to avoid hampering necessary trading and legitimate speculation.

521. *Credit necessary.*—29. Credit is the instrument of speculation, and without credit no general speculative change of prices could take place. Currency diverted in one direction to increase price must be taken from another direction causing a depression there. Credit, however, affords an instrument created for the purpose.

30. Credit is a necessary medium of exchange under present conditions, and if we restrict its use we run the danger of hindering legitimate commerce. The problem is: How to provide an abundant credit currency for commerce which the speculators cannot divert to their own uses?

31. The plan to withhold from the central reserve city banks the reserves of other banks, a portion of which is now permitted to be held by the central reserve city banks, would curtail the credit currency of those banks and would hamper commerce. Speculators are always able to bid higher for loanable funds when they want them, so the contraction would harm commerce rather than speculation.

32. A plan is desired by which commerce might have at all times abundant credit currency not available to the speculators.

522. *Financial and commercial banks.*—33. Suppose we separate the national banks in the central reserve cities into two classes: Commercial and financial.

Financial banks should be allowed to loan on collateral security to brokers and speculators but they must make public every transaction, giving the name of the borrower, the name of the collateral, and the terms of the loan. They should not be permitted to act as reserve agents of national banks, or to issue bank notes. They should have trust company functions, and deal in bonds.

34. Commercial banks should not loan on collateral security, unless the borrower makes affidavit that the proceeds are not to be used in purchasing stocks. Granting of loans, the proceeds of which are used to trade in stocks or speculative commodities, should cause the bank to be classed as a financial bank.

Commercial banks should be allowed to act as reserve agents, and to issue bank notes based on assets. They should have trust and savings functions.

35. National banks should not be permitted to keep deposits in state banks or trust companies except for the purpose of necessary exchanges. This would limit the power of state banks and trust companies in giving aid to speculation. Legislatures, especially in New York, should be urged to limit speculation along the same lines.

36. Every broker should be registered with the state officer of banking, and his books should be open at all times to the inspection of proper officials. A tax on every transaction is advisable because it makes speculation more expensive while it does not interfere to any great extent with legitimate trading.

523. *Function of commercial bank.*—37. The proper function of a commercial bank is to provide working

capital to industry. It is very difficult for the law to distinguish between *fixed* and *working* capital loans. The prohibition of loans on mortgage security is an attempt in this direction, but loans on personal security may be used for investment in land, and loans on mortgage bonds are not prohibited while merchants of limited credit, unable to give any security besides land for loans for strictly industrial uses, are refused assistance.

38. Fixed capital is capital invested in real estate, factory buildings, machinery, fixtures, etc.

Working capital is capital invested in raw materials, fuel, wages, and other running expenses, especially credit given to customers. The amounts invested will be realized in cash by the borrower within six months in the natural course of the economic process.

39. The reason banks should loan only working capital is not that such loans have better security but that the cash for payment at maturity of the note appears automatically through the "ripening" and sale of the products of the business. Everything which accelerates the industrial process is of public benefit.

Investment of capital in fixed forms should be left to investors and savings banks. Commercial paper and not bonds are the proper assets of a commercial bank. Furnishing funds for the purchase or flotation of bond issues is not a proper function of the bank, for bonds do not liquidate themselves naturally. The more bonds are held by banks the more difficult will it be to realize cash for them in an emergency and the less able will the banks be to serve the legitimate business interests of the community.

40. The provision prohibiting loans on real estate is a clumsy attempt to accomplish a certain purpose. National banks should be permitted to have bond and investment departments.

QUIZ QUESTIONS

(The numbers refer to the numbered sections in the text.)

CHAPTER I

1. Name the chief reason why the study of money and banking is of advantage to the business man. Is it fair to place as much blame upon legislators for a bad currency system as upon architects for a bad building?

2. Were warnings given of the panic of 1907?

3. What is the relation between the sciences of money, finance and economics?

4. What is the science of finance?

5. Show how every business has a technical and a business side.

6. Why is business the result of the specialization of labor?

7. Name the phases of production.

8. How is the changing of ownership productive?

9. When did the value of exchange begin to be recognized?

10. In what countries are the rights of private property most strictly enforced?

11. Distinguish between property and wealth. Is money wealth?

12. What is the effect of the integration of industry?

CHAPTER II

13. Describe three stages of economic history based on the method of exchange.

14. What are the obvious limitations of exchange by barter?

15. Show how the introduction of a medium of exchange simplifies trade. Explain why "all trade is finally barter."

16. Show that money represents incomplete exchanges. How does the miser differ from other people in his attitude towards money? Show the similarity between money and a railroad ticket.

17. Define credit. What other meaning of the word sometimes leads to confusion?

18. Why is credit a good medium of exchange? Do you think that merchants and bankers earn their incomes as truly as farmers or laborers?

19. Are money and credit real wealth? Would you expect a millionaire to have much money in his possession?

20. Distinguish between production and consumption goods.

21. Describe the entrepreneur system of production.

22. What is capital? From what source does it derive its economic importance?

23. Define "capitalization." How is it possible to know when a corporation is over-capitalized?

24. From whom comes the demand for capital goods and for what purpose? How may the entrepreneur acquire purchasing power?

25. On what human motives does the accumulation of capital depend?

26. Name four methods by which the saver of the income may invest.

27. Show how a good currency system increases the incomes of all producers.

CHAPTER III

28. Explain how value is a register of economic forces. Explain the meaning of the phrase, "profit is the mainspring of industry."

29. Give a definition of the word "value." What is meant by the expression "common measure of value"?

30. Give the legal definition of the dollar.

31. What is the sole utility of money? Why is it loanable?

32. What objections are there to gold as a standard of value?

33. Show why the cost of production theory of value is unsatisfactory.

34. State briefly the utility theory of value.

35. Define "marginal utility." Show how it is illustrated in the demand for automobiles.

36. What is the "law of satiety"? What is its relation to the theory of marginal utility?

37. How may the two theories of value be reconciled?

CHAPTER IV

38. Define "exchange utility."

39. What commodities were first used as standards of value?

40. What three functions of money were developed in primitive money?

41. What was wampum? What gave it its value?

42. Why were beaver skins used as money by the early settlers of the United States?

43. What were the disadvantages of agricultural products as money?

44. What laws were passed in Virginia to maintain the value of tobacco? Did they succeed? Compare the destruction of growing tobacco plants in early Virginia to the same acts committed by the "night riders" in Kentucky in 1906. To what modern form of currency in the United States may the "tobacco notes" be compared?

45. Name the qualities which must be possessed by a good currency.

46. Why is the quality of divisibility necessary?

47. Why were beaver skins unsuitable for use as money on account of their lack of uniformity?

48. Why should a substance used as money possess the quality of cognizability?

49. Why have civilized countries generally adopted gold and silver as money? Do these metals possess stability of value?

CHAPTER V

50. Why were silver and gold the fittest standards to survive?

51. Name the good qualities of silver and gold as money.

52. When and where was platinum used as money? Why was the experiment a failure?

53. Name the defects of gold and silver as money.

54. How have two of the defects of gold and silver been overcome?

55. How did the earlier coins get their names?

56. Name three requirements of good coinage. What motives led to the debasement of the coinage? Who was injured by the debasement of the coinage?

57. What is the essential quality of the standard of value?

58. Why would silver disappear from circulation if the demand for its use in manufactures increased?

59. What is Gresham's Law?

60. How did the earlier legislators attempt to deal with the effects of Gresham's Law? What result?

61. Give a brief sketch of England's experience with the double standard.

62. How did England come to adopt the single gold standard?

63. What effect has minting upon the value of metals?

64. Define "legal tender."

65. What were Alexander Hamilton's proposals respecting coinage in the United States in 1791?

66. Why was the ratio of 15:1 unsatisfactory?

67. Why was there no gold coined in the United States before 1834?

68. Why did the newly-coined silver dollars disappear from circulation?

69. What change did Congress make in the ratio in 1834? What was the effect?

70. What change occurred in the standard in 1863?

71. How was the single gold standard adopted in the United States?

72. For what did the Act of 1900 provide?

73. Briefly sum up the evolution of the standard in the United States?

CHAPTER VI

74. Show why gold is defective as a standard of deferred payments.

75. Find illustrations to prove the economic advantage of the enforcement of contracts.

76. How may contracts be impaired by legal tender laws?

77. On what grounds were the Legal Tender Acts declared constitutional?

78. Why were the defects of gold as a standard of deferred payments the cause of the free silver agitation in 1896?

CHAPTER VII

79. Distinguish clearly between value and price and show that the prices of goods depend as much upon the value of money as upon the value of the goods.

80. How is it possible for prices to rise when the conditions of supply and demand seem to warrant a decline?

81. What is the utility of money?

82. Distinguish between "desire" for money and the economic "demand" for it.

83. Name and define three varieties of money.

84. Give illustrations of fiat and credit money.

85. Analyze the demand for money.

86. What determines the rapidity of circulation of money?

87. What effect has population on the demand for money?

88. What is the relation between division of labor and the circulation of money? What effect has the integration of industry on the circulation of money?

89. Show how foreign trade may result in a special demand for gold.

90. Show how contracts sometimes affect the demand for money.

91. Does the use of money as a store of value affect the demand?

92. What effect upon the demand for money arises from insecurity of contracts and property?

93. Under what circumstances may it be advisable for persons to hoard money?

94. Is hoarding a cause or an effect of a panic?

95. Define "hoarding." What is its effect on the value of money? What are some of the injurious indirect effects of a bank failure connected with money?

96. What is the essential difference between a private and a bank store of money?

97. Is the money in the Government Treasury a hoard?

98. Does the demand for money always fall equally upon different varieties of money?

99. Give illustrations of seasonable demands for money.

100. How far does international trade create a demand for money?

101. What are the bad effects of a premium on gold?

102. Name some reasons why the demand for money is very irregular.

103. What is the uncertain element in the supply of money?

104. Why is gold practically the only elastic element in our currency?

105. Does the quantity of gold actually produced in a country determine the supply in that country?

106. What factors determine the supply of gold?

107. Explain how the utility of gold has little connection with its quantity.

108. What are the advantages of an increased supply of money?

109. Why are the temporary results of a change in the money supply likely to be serious even though ultimately the effect may be *nil?*

110. Trace the history of a brick of new gold and its effects.

111. Why does not the circulation of new gold continue to raise prices indefinitely?

112. What would be the effect on prices if the miner should choose to hold the gold coins or paper money equivalent for the gold which has increased the money supply of the country?

113. What is the effect if the miner deposits the new gold in a bank? Show how the effect of new gold spreads throughout the world. What advantage has the country producing gold over other countries?

114. What would be the effect of an issue of paper money; compared with gold?

115. How is it possible to determine how much money is needed by a country?

116. What difficulties arise from the facts that price changes are not synchronous?

117. Show how rising prices stimulate industry.

118. Why is not an increase in the supply of money always an unqualified benefit?

119. Give some illustrations of the universal law of rhythm.

120. What is the consequence of the cumulative effect of economic forces?

CHAPTER VIII

121. Explain how every debtor has sold money "short."

122. How are the shorts "squeezed" in the money market?

123. Explain why prices of stocks may decline so suddenly?

124. What effect will the better education of the people in financial affairs have upon the fluctuations in values?

125. What is meant by the general price level?

126. What is a price table?

127. Why should a price table not be confined to a few commodities?

128. How are price tables constructed?

129. For what purpose is "weighting" of price tables used?

130. What are the advantages of "weighting"?

131. Why does the Faulkner Price table show prices to be so high during the Civil War?

132. What are Index Numbers? Prepare a chart illustrating the rhythmic swings of prices. Account for the greater swings.

133. Describe some of the important index numbers prepared by European statisticians.

134. What are the most important forces to be reckoned with in forecasting changes of the general price level?

135. What is the effect of excessive saving on prosperity? State the rule for predicting general price changes.

CHAPTER IX

136. What is the difference between domestic and foreign exchange?

137. How may payments be made without the use of cash?

138. How do banks facilitate payments without the use of cash?

139. Why is New York Exchange so universally acceptable?

140. How do banks all over the country get their power to sell New York exchange?

141. Tell how the banks handle New York exchange.

142. How do banks settle balances between themselves?

143. What are the items of expense in shipping currency?

144. How do the United States subtreasuries assist the banks in the settlements of balances?

145. How is the price of New York exchange determined?

146. What is the significance of rates of domestic exchange? Explain why it is impossible for a community to lose all its cash in the settlement of balances?

147. How does the clearing house principle apply to domestic and foreign exchange?

148. How may the use of cash be eliminated even in the settlement of balances? credit

149. Why are the movements of gold so important?

150. What is the economic function of the dealer in foreign exchange?

151. How do the foreign exchange dealers really loan working capital to their customers?

152. Why are bankers willing to purchase drafts of exporters?

153. Why are New York banks always willing to purchase foreign drafts?

154. Define sterling exchange.

155. If the English pound sterling contains 113 grains, how is it possible to determine its value in United States money?

156. How is the cost of shipping gold across the Atlantic calculated?

157. What is the minimum price of demand sterling exchange?

158. Why is it impossible under normal conditions for sterling exchange to sell higher than $4.8865?

159. Explain the conditions which made it possible for the price of demand sterling to fall to $4.83 in March, 1907.

160. Describe the English gold bullion market.

161. How was it possible for the Bank of France to maintain a 3 per cent. discount rate in 1906, while funds could be loaned in London at 6 per cent.?

162. What is the significance of shipments of gold to foreign countries?

163. Mention certain peculiarities of our foreign commerce.

164. What are the "invisible" items of foreign trade?

165. Show how capital moves from one country to another.

166. Show that interest and dividend payments to foreigners affect the so-called foreign trade balance.

167. What effect upon the demand for foreign exchange is exerted by the fact that American merchandise is carried in foreign ships?

168. How do American tourists in Europe affect the demand for foreign exchange?

169. What points are worth mentioning in a daily newspaper article on foreign exchange?

170. Explain the "London Settlement."

171. What is meant by "cables"? By speculation in foreign exchange? By "covering movement"? By manipulation?

172. Explain the several varieties of exchange. How are their values determined?

173. What is demand sterling and why do different demand bills sell at different prices? At what rate of interest are long bills discounted?

174. What is the business of London bill brokers?

175. What is the effect on the price of exchange of an issue of 60-day finance bills? The effect 60 days later?

176. Upon what does profit on finance bills depend? Show that their issue is equivalent to borrowing money abroad. What effect does their issue have upon rates of interest? What advantage does London possess over other financial centers?

177. What are the advantages to a bank from having a foreign department?

178. Why is a man who wishes to travel abroad likely to transfer his deposit account to a bank which can sell him a letter of credit? Suppose you have a letter of credit issued on a deposit account. If you asked for £10 at the Deutsche Bank in Berlin on a day when sterling was quoted at M. 20.43, how much would you realize in marks? For how much would your deposit account be debited when the draft reached home, if sterling exchange was selling at $4.86?

179. What are the advantages of using a commercial

letter of credit? Why are banks all over the world eager to cash letters of credit?

180. Suppose I want to borrow £10,000 for 90 days. Demand sterling sells at \$4.88 and the Bank of England rate is 5 per cent. At the end of 90 days demand sterling sells at \$4.84. I can loan funds at home for 6 per cent., what profit can I make by selling finance bills?

181. A Philadelphia banker sells a draft for 240,175 Kronen on Vienna. By cabling to Vienna he learns that sterling exchange is worth 24 Kronen 17½ heller (100 heller = 1 Kronen). The current price for demand sterling in Philadelphia is \$4.865. What profit can be made by buying sterling to cover if he sold the draft on Vienna for \$.2030 per Kronen?

182. Would there be any profit in an arbitrage transaction at the following quotations?

Sterling in New York	\$4.885
Francs in London	25.10
Francs in New York	5.16 ⅞ less 1-32

Show the profit on \$1,000 invested in the arbitrage transaction.

CHAPTER X

183. What is the world's stock of gold and silver?

184. How much silver is it estimated that the world has produced? Why did mining decline after the fall of the Roman Empire?

185. How were wars financed during the Feudal Period?

186. What was the effect produced by the new stock of silver from America?

187. Show the effect of American silver upon economic conditions in Europe.

188. What caused the new money to get into circulation?

189. Describe the discoveries of gold in California and Australia in the Nineteenth Century.

190. What were the effects produced by the gold discoveries in California?

191. What discoveries of gold were made in 1889 and a few years later?

192. Whence comes the largest amount of gold at the present time?

193. Explain the origin of gold.

194. Describe placer mining.

195. What improvements have been made upon old methods?

196. Describe the method of dredging.

197. Estimate the economic importance of the cyanide and chloride processes.

198. In a general way what have been the net financial results from gold mining?

CHAPTER XI

199. What is bimetallism?

200. What are some of the difficulties of maintaining a bimetallic standard? Why did the difficulties arise only in the Nineteenth Century?

201. What are the advantages of bimetallism?

202. Give the argument in favor of international bimetallism.

203. In what ways do silver standard countries suffer economically?

204. What early attempts were made to inflate the currency?

205. What is meant by the "demonetization" of silver?

206. What was the Latin Union?

207. What caused silver to decline in price so suddenly after 1870? Under what circumstances was silver demonetized in the United States?

208. Why were the silver purchase acts of 1878 and 1900 passed?

209. What was the connection between the Sherman Act and the panic of 1893?

210. How did the purchase of silver embarrass the Treasury?

211. What was the attitude of the banks toward the silver dollar?

212. Explain the origin of the silver certificate.

213. What was the currency situation in the United States in 1890?

214. What is the importance of the gold reserve in the United States Treasury?

215. What was the greatest official act of President Cleveland's second administration?

216. Upon what authority did President Cleveland issue bonds?

217. Why was it necessary to issue so many bonds in 1894–1895?

218. How were the exports of gold finaly stopped?

219. Why did the panic of 1893 fail to give the public a wholesome lesson in finance? Was it caused by a scarcity or a plethora of money?

220. Explain the origin of the free silver movement.

221. What arguments were used by the advocates of free silver to convince the farmer?

222. What argument was used in order to convince the workingman?

223. What arguments were used by the advocates of gold?

224. Show the fallacy involved in the "50-cent dollar" argument.

225. What would have been the effect of a free coinage law upon prices?

226. Describe the real debtor and creditor classes.

227. How was the silver question finally solved?

228. Describe the "gold-exchange" standard of Mexico.

CHAPTER XII

229. What is a credit? How do credits originate?

230. Show how credit is of great importance in industry.

231. What is the function of commercial banking?

232. Describe the bond and mortgage.

233. Show how the use of credit facilitates the lumber industry.

234. Describe the characteristics of timber bonds.

235. Why is there such a difference in the interest rates of different classes of bonds?

236. What are the advantages of long-time borrowing?

237. Show how credit economizes the use of gold.

238. What danger lies in the liquidation of credits?

239. What effect have the commercial paper houses on the credit system?

240. What qualities must credit have in order to circulate as a medium of exchange?

241. Compare the two forms of bank circulating credit.

242. How is a deposit credit utilized? What kind of bank credit do thickly settled communities use?

243. What is meant by the elasticity of deposit credit? When will deposit credits depreciate? What causes credits to be liquidated?

244. Show how gold is the basis of all credit.

245. What are the reserve requirements of the National Bank Act?

246. How much reserve should a bank keep?

247. How is credit an element of great danger in panics?

248. Why is credit a subject well worthy of investigation?

CHAPTER XIII

249. What is the general effect of the use of credit on prices?

250. Describe the various effects of the different kinds of credit on prices?

251. Show how transactions may be settled without the use of money at all.

252. Show how a lessened demand for money causes a rise in prices.

253. What effect does an issue of national bank notes have upon prices?

254. Explain the difference in circulation of bank notes and checks.

255. Has government credit money a greater or less effect on prices than bank notes?

256. What is the relation between credit and speculation? Differentiate between legitimate and illegitimate speculation.

257. How may speculation be both the cause and effect of a rise of prices?

258. Describe the conditions which cause a contraction of credit.

CHAPTER XIV

259. Name the varieties of government credit currency.

260. What is the essential element in fiat money?

261. What are the factors determining the value of credit money?

262. What is the danger in the use of credit money? What devices are used to maintain the value of credit money?

263. If an issue of credit money is excessive, what will be the effect on its value?

264. What devices are used to maintain the value of credit money?

265. Give an argument in favor of government credit money.

266. What are some of the difficulties of adjusting the supply of government credit money?

267. What was the feeling of the people regarding government issues before 1861?

268. Why are government bonds not credit money? What problem was raised by the financing of the Civil War?

269. What are some of the disadvantages of government debt?

270. Why are notes a greater element of weakness in government finance than bonds?

271. Contrast government borrowing with that of private concerns.

272. If an issue of credit money is excessive, what will be the effect on its value?

CHAPTER XV

273. Classify the productive industries into three groups.

274. Recapitulate the fundamental principles of exchange.

275. Show that a credit is a contract to pay money.

276. What is the business of a bank?

277. In what two ways do banks supply a medium of exchange?

278. Explain why banking is a quasi-public function?

279. How does the bank act as agent between the capitalist and entrepreneur? Explain how the bank is a distributer of capital.

280. What banking principle is it the violation of which causes a large proportion of bank failures? Name three reasons why banks should not loan funds to be converted into fixed capital.

281. Trace the evolution of the two main functions of banking. Contrast the Bank of Amsterdam with the Bank of England.

282. What are some of the peculiar privileges of bankers?

283. Disprove the statement that "banks create capital."

284. From what sources does a bank obtain its capital and credit?

285. What are the three essential banking operations?

286. How is the banker the "arbiter of investment"?

CHAPTER XVI

287. Does a bank lend credit or money? Show that credit as a medium of exchange is superior to money.

288. Show how credit promotes the production of goods.

289. How do banks create credits?

290. Why is bank credit preferable to cash?

291. Show how bank credit passes from hand to hand without being liquidated.

292. Show the similarity between checks and bank notes.

293. On what does the earning power of a bank depend? Does the National Bank Act limit the amount of loans a bank may make?

294. Does it make any difference to a bank whether it loans cash or credit? Illustrate the point by an example.

295. Why is the control of great stores of cash so great a prize in Wall Street? A national bank in Kalamazoo, Michigan, receives a cash deposit of $1,000 which is left for one year intact, no checks being drawn against it. The bank has no difficulty in loaning to its own customers at 6 per cent. These customers make all their payments by check and deposit all their receipts in the bank. Calculate the gross profit which the bank can make on the $1,000 deposit, leaving out of account all expenses of doing business.

296. What factors determine the amount of deposit currency available in this country at any given time? By what means might the maximum limit to the amount be raised?

297. Show how the lack of coöperation between the banks causes them to lose part of their reserves.

298. By what methods may a bank replenish its reserve?

299. What is a secondary reserve? Is there any danger in this policy?

300. Do bonds constitute a reliable reserve?

301. How did the Aldrich-Vreeland Act make bonds a valuable asset in a panic? (Also see Appendix I.)

CHAPTER XVII

302. How does a bank statement differ from a mercantile form?

303. How does the statement of the national banks prove the validity of the deposit currency theory? How much deposit currency is there in the United States?

304. Why do the resources and liabilities exactly balance?

305. What do the items on the liability side signify? How do changes in the values of resources affect the statement?

306. What are "concealed assets"? Are they good policy?

307. Distinguish between discounting and loaning.

308. What is an over-draft?

309. Where do the securities held as collateral on loans appear?

310. How are the deposits of the United States Government secured?

311. Why do banks sometimes carry government bonds in their own vaults?

312. What is meant by the premium on United States bonds?

313. What is included under bonds, securities, etc., and why has this item increased greatly in recent years?

314. Are banks usually the owners of the large buildings in which their offices are situated?

315. What is the law regarding the holding of real estate by a bank?

316. What is meant by the item "due from national banks"?

317. What is an "approved reserve agent"?

318. What are cash items?

319. Why do national banks seek to have on hand as few bank notes as possible?

320. What are legal tender notes?

321. What is the Redemption Fund?

322. What is included under "due from the United States Treasury"?

CHAPTER XVIII

323. Why is the mimimum capital of a bank proportioned to the size of the city in which it is located? Theoretically how large should the capital of a bank be?

324. What is the double liability feature of bank stocks? Why is the above distinction made between bank and other stocks? How is it possible for the capital of a bank to be really fictitious?

325. What is the purpose of the surplus? What is the requirement of the National Bank Act regarding surplus? Why do some banks start with a surplus? What is meant by the "book-value" of bank stocks?

326. What disposition is ultimately made of the item "undivided profits"?

327. What inducement is there for the banks to take out circulation?

328. Explain the item "State Bank Notes Outstanding."

329. Explain the item "individual deposits." What is a certificate of deposit?

330. Under what conditions does the government deposit in national banks?

331. Explain the item "bonds borrowed."

332. What is the difference between American and European banking in the matter of rediscounting?

333. What are the "bills payable" of a bank?

334. What is the effect of certifying a check?

335. What is a "cashier's check"?

CHAPTER XIX

336. What five institutions are called "banks"?

337. What is the difference between national and state banks?

338. What is the principal business of large private banks?

339. Describe "underwriting."

340. What is the difference between the trust company and a bank? How did the trust company get its name?

341. Are trust companies required to keep reserves?

342. What is the nature of the deposits in trust companies?

343. What departments are required in a trust company?

344. What are the functions of a trust company as individual trustee?

345. Describe the corporate trusts of a trust company.

346. Why is a savings bank really not a bank at all?

347. Describe the organization of a bank.

348. Describe the evolution of a bank in a small town.

349. Where is ultimate authority located in an incorporated bank?

350. What are the requirements for directors named in the National Bank Act? What is the penalty on directors if they allow the law to be violated?

351. What considerations govern the choice of directors?

352. According to the courts, what is the responsibility of bank directors? How may the directors ascertain the true condition of the bank?

353. Of what value is the plea of ignorance?

354. Can directors rely implicitly on the reports of national examiners? What two types of loans should directors be familiar with?

355. What should be the attitude of bank directors toward loans to officers and other directors?

356. What are the duties of the president?

357. Who is the chief executive officer of a bank? What is the importance of the credit department of a bank?

358. What are the duties of the paying teller? Discount clerk?

359. What are the duties of the receiving teller? From what four sources do funds come into a bank?

360. What are the duties of the note teller?

361. Describe the work of the discount clerk and show why he is busy during a period of active speculation.

362. Mention the important books kept by a bank.

363. What is the law with regard to collections? What risk is connected with a tramp collection?

364. What is the responsibility of a collecting bank?

365. What is the expense of collecting out-of-town checks? What schemes have been proposed for lessening the expense of collecting country checks?

366. What is the English method of collecting country checks?

CHAPTER XX

367. Distinguish between general and special deposits.

368. How did the Legal Tender Acts work a hardship to the depositors during the War? How far is a bank responsible for special deposits?

369. What advantages do the safety deposit vaults bring to a bank?

370. What are the inducements offered to depositors by the banks?

371. Describe the difficulties in the way of establishing a new bank.

372. Why are depositors loyal to old and conservative banks?

373. When do depositors practice the "kiteing" of checks?

374. Illustrate the method of "kiteing."

375. Show how the title to deposit checks often becomes an important question.

376. Give an illustration of a case of disputed ownership.

377. What is the law regarding the acceptance of deposits by insolvent banks?

378. What risk does a holder run by retaining a check too long?

379. What is meant by "reasonable time" in the case of a local bank?

380. What recourse has the holder if a bank refuses to pay a check?

381. Can a depositor stop payment on a check? What effect has the death of a depositor upon checks not yet paid?

382. Can a bank pay a check if funds to the credit of the depositor are insufficient?

383. What is a bank's liability in the case of a forged check?

384. May a bank pay a post-dated check before it is due?

385. What is the effect of the fact that the relation between the bank and the depositor is that of debtor and creditor? What is meant by "set-off"?

386. If a bank holds a depositor's unsecured note and the depositor fails, what right has the bank to his deposit?

387. If a bank fails may a depositor pay his note to the bank by a check on his deposit?

388. Show that the "set-off" may make failures appear worse than they really are.

389. Illustrate the foregoing by a concrete case.

390. Show how banks sometimes protect themselves against loss through a borrower's insolvency.

CHAPTER XXI

391. What two qualities are essential to the making of the banker?

392. What are meant by investment loans?

393. Under what conditions are investment loans good banking loans?

394. What are industrial loans? Show how they are secured. What are re-discounts?

395. What is meant by "Capital" loans?

396. Should a bank loan a concern money for the construction of a plant?

397. What corporations lend money on mortgages?

398. How are the loans classified in the reports to the Comptroller?

399. What changes have taken place in ten years in the proportion of the demand loans?

400. What does "double name paper" represent? Is this paper much used in large cities?

401. Distinguish between "trade" and "brokers'" paper.

402. What provisions distinguish the judgment note?

403. Name the provisions of the collateral note by which the bank protects itself against loss.

404. What risk is involved in collateral loans?

405. Explain what is meant by legal rate of interest.

406. How are call loan rates of over 100 per cent. consistent with the usury laws?

407. Why do conservative bankers object to loaning on book accounts?

408. What is the task of the financial manager of an enterprise?

CHAPTER XXII

409. What classes of property may serve as collateral for loans?

410. What are some of the difficulties of using merchandise as collateral?

411. What are the advantages of good warehousing laws?

412. Show that loans on merchandise are a legitimate function of banks.

413. What was the early practice of the Corn Exchange Bank of New York?

414. Why is merchandise better collateral now than formerly?

415. How does the new Uniform Law safeguard warehouse receipts?

416. What are the risks involved in loaning on warehouse receipts?

417. What are the responsibilities of a warehouseman under the present law?

418. How is the issue of receipts safeguarded?

419. What protection is afforded to holders of receipts?

420. Is garnishment allowed?

421. What is the penalty for the illegal issue of receipts?

422. What do some banks substitute for warehouse receipts?

CHAPTER XXIII

423. When did credit departments appear in banks?

424. Name the sources of credit information.

425. How far are the credit agencies to be depended upon?

426. What are the duties of the credit man?

427. What is the business of the commercial note broker?

428. What changes have taken place in the commercial paper business recently?

429. Upon what do the demand and supply of commercial paper depend?

430. Show how a country possesses areas of high and low interest rates.

431. What four inducements may a dealer in commercial paper offer to a borrower?

432. What is the best guarantee against loss furnished by a dealer in commercial paper?

433. What is the usual size of notes handled by dealers in commercial paper? How are they quoted?

CHAPTER XXIV

434. What were the characteristics of early banking in the United States?

435. What was the relation of early banks with the government?

436. Divide the history of United States banking into four periods.

437. Describe some of the banks prior to the First Bank of the United States.

438. What are the dangers of permitting banks to loan on bank stock?

439. What were some of the features of the First Bank of the United States?

440. Was the Bank successful? How much did it lend to the government?

441. On what grounds was the First Bank of the United States objected to?

442. Why was the Second Bank of the United States organized?

443. Compare the Second with the First United States Bank.

444. How was the Second Bank mismanaged?

445. Why was President Jackson opposed to the Bank?

446. What argument does the history of the two Banks of the United States furnish against a central federal bank?

447. Describe the Suffolk Banking System.

448. What two plans of note issue were tried in New York State?

449. Describe the New York Safety Fund System.

450. Describe the bond deposit or free banking system.

451. Why did the Safety Fund System fail?

452. What were the causes of the failure of the Free Banking System? Was it adopted in other States? What was its only advantage over the Safety Fund System?

453. What was the experience of other states with their banks?

454. Describe the Bank of Indiana. Why was it successful? Describe the State Bank of Ohio.

CHAPTER XXV

455. What conditions led to the National Bank Act?

456. What effect did the Act have on the market for United States bonds?

457. Give the early history of the Act.

458. What are the duties of the Comptroller of the Currency?

459. Name the chief provisions of the Act?

460. Describe the issue and redemption of National bank notes.

461. What were the evils of the national banking system?

CHAPTER XXVI

462. Name some of the differences between a bank note and a deposit currency.

463. What are the limitations of the deposit currency?

464. Explain how the present system intensifies stringencies and panics at certain seasons.

465. Show that the danger of depleted reserves is acute in times of panic.

466. What methods have been used to counteract the seasonal stringencies and panics?

467. Why is the circulation of bank notes inelastic?

468. Under what circumstances does the bank-note circulation increase?

469. What are the disadvantages of the lack of unity in our system?

470. What is the importance of savings banks?

471. Whence comes the need for the postal savings banks?

472. What are the arguments for and against the guarantee of bank deposits?

CHAPTER XXVII

473. What is the economic function of Wall Street?

474. Where do the dealers in securities get their working capital?

475. Describe the method of making a collateral loan.

476. How do the banks avoid technical over-certification?

477. What restrictions do the banks make on collateral?

478. What is the peculiarity of the call loan rate of interest?

479. Show why the responsibilities of the loan clerk are great in Wall Street banks.

480. What are undigested securities?

481. How does the state of the bank reserves affect the prices of securities?

482. What advantage would come from dividing banks into two classes—commercial and financial?

483. What additional privileges should be given to national banks?

484. Why is it proper to forbid financial banks acting as reserve agents?

CHAPTER XXVIII

485. In what way is the Secretary of the Treasury compelled to assume more responsibility than belongs to his office?

486. How does the United States Treasury intensify monetary stringencies?

487. Are these conditions the result of our currency or of the Treasury laws?

488. What expedients have been used by Secretaries of the Treasury to mitigate stringencies?

CHAPTER XXIX

489. Under what circumstances was the Bank of England founded? Describe the business of the original Bank of England.

490. What conditions caused the development of the use of checks?

491. What were the provisions of the Bank Act of 1844?

492. What is the present character of the Bank of England note?

493. What is the relation of the Bank of England to the Government? How is the Bank of England the center of the banking system of Great Britain?

494. Describe the history of early banking in France.

495. What are the distinguishing features of the Bank of France?

496. To what extent is deposit currency used in France?

497. What security is behind the notes of the Bank of France?

498. Contrast the Bank of England and France with reference to the fundamental principle upon which they are based.

499. Compare the Reichsbank of Germany with the Bank of England.

500. How does the government influence the Reichsbank?

501. Show that the Bank of Germany is modeled after the Bank of England.

502. What reserves is the Bank of Germany required to keep?

CHAPTER XXX

503. Name the chief features of the Canadian Banking System. How is the banking business extended?

504. What is the security back of Canadian Bank notes?

505. How does the anxiety of each bank to keep outstanding as many notes as possible cause rapid redemption of the notes?

506. Why is the Canadian system so elastic?

507. What is the Canadian theory of reserves?

508. What are the advantages of branch banking?

509. Describe the financial details of the moving of the Canadian wheat crop.

510. What does the Canadian farmer receive in exchange for his wheat?

511. Why do the Canadian banks have so many branches in Chicago and New York?

512. Describe the seasonal fluctuations of the amount of Canadian bank notes.

CHAPTER XXXI

513. To what extent is our present currency "inelastic"? How are the bad effects of our currency manifested? Does our present currency increase or diminish speculation? Is our deposit currency inelastic? What determines the amount of deposit currency?

514. What are the objections to United States notes? What are the objections to bank notes based on United States bonds? Do the same objections apply to bank notes based on state and municipal bonds? On railroad bonds?

515. Do you think that the banking business of the country should be administered more or less by the government than it now is? What obstacles must exist to a change in the Sub-treasury system? Should the government depositories pay interest on government deposits and why? Why do they not do so now?

516. How much reserve should a bank keep? Should bank reserves be rigid or flexible? Why should a reserve be kept against bank notes? In what respect are our reserve laws defective and dangerous? Name four possible demands for cash which may deplete the bank reserves.

517. Is there any way to have guaranteed bank deposits without incurring the danger of unsound banking?

518. What objection is there to the plan permitting national banks to have trust and savings departments? What advantages? What is the danger of an asset

currency so long as state banks and trust companies exist?

519. What benefit would come from a central bank? What prevents the United States from becoming a great financial center? How would centralized banking make possible a clearing house for country checks? How could a central bank prevent failures and panics? How could it increase the effectiveness of the reserves?

520. Distinguish between necessary trading, legitimate and illegitimate speculation. Show how illegitimate speculation tends to increase fluctuations in price.

521. Why not restrict speculation by curtailing credit?

522. What is the difference between Commercial and Financial banking? Why give financial banks trust company functions? Show how publicity would check speculation. Distinguish between working and fixed capital.

523. Why should not a bank provide fixed capital for industry? How does the National Bank Act try to prevent the banks from loaning fixed capital? Does it succeed?

APPENDIX I

GOLD STANDARD ACT OF MARCH 14, 1900

[PUBLIC—No. 39.]

An Act To define and fix the standard of value, to maintain the parity of of all forms of money issued or coined by the United States, to refund the public debt, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the dollar consisting of twenty-five and eight-tenths grains of gold nine-tenths fine, as established by section thirty-five hundred and eleven of the Revised Statutes of the United States, shall be the standard unit of value, and all forms of money issued or coined by the United States shall be maintained at a parity of value with this standard, and it shall be the duty of the Secretary of the Treasury to maintain such parity.

SEC. 2. That United States notes, and Treasury notes issued under the Act of July fourteenth, eighteen hundred and ninety, when presented to the Treasury for redemption, shall be redeemed in gold coin of the standard fixed in the first section of this Act, and in order to secure the prompt and certain redemption of such notes as herein provided it shall be the duty of the Secretary of the Treasury to set apart in the Treasury a reserve fund of one hundred and fifty million dollars in gold coin and bullion, which fund shall be used for such redemption purposes only, and whenever and as often as any of said notes shall be redeemed from said fund it shall be the duty of the Secretary of the Treasury to use said notes so redeemed to restore and maintain such reserve fund in the manner following, to wit: First, by exchanging the notes so redeemed for any gold coin in the general fund of the Treasury; second, by accepting deposits of gold coin at the Treasury or at any sub-treasury in exchange for the United States notes so redeemed; third, by procuring gold coin by the use of said notes, in accordance with the provisions of section thirty-seven hundred of the Revised Statutes of the United States. If the Secretary of the Treasury is unable to restore and maintain the gold coin in the reserve fund by the foregoing methods, and the amount of such gold coin and bullion in said fund shall at any time fall below one hundred million dollars, then it shall be his duty to restore the same to the maximum sum of one hundred and fifty million dollars by borrowing money on the credit of the United States, and for the debt thus incurred to issue and sell coupon or registered bonds of the United States, in such form as he may prescribe, in denominations of fifty dollars or any multiple thereof, bearing interest at the rate of not exceeding three per centum per annum, payable quarterly; such bonds to be payable at the pleasure of the United States after one year from the date of their issue, and to be payable, principal and interest, in gold coin of the present standard value, and to be exempt from the payment of all taxes or duties of the United States, as well as from taxation in any form by or under State, municipal, or local authority; and the gold coin received from the sale of said bonds shall first be covered into the general fund of the Treasury and then exchanged, in the manner hereinbefore provided, for an equal amount of the notes redeemed and held for exchange, and the Secretary of the Treasury may, in his discretion, use said notes in exchange for gold, or to purchase or redeem any bonds of the United States, or for any other lawful purpose the public interests may require, except that they shall not be used to meet deficiencies in the current revenues. That United States notes when redeemed in accordance with the provisions of this section shall be reissued, but shall be held in the reserve fund until exchanged for gold, as herein provided; and the gold coin and bullion in the reserve fund, together with the redeemed notes held for use as provided in this section, shall at no time exceed the maximum sum of one hundred and fifty million dollars.

Sec. 3. That nothing contained in this Act shall be construed to affect the legal-tender quality as now provided by law of the silver dollar, or of any other money coined or issued by the United States.

Sec. 4. That there be established in the Treasury Department, as a part of the office of the Treasurer of the United States, divisions to be designated and known as the division of issue and the division of redemption, to which shall be assigned, respectively, under such regulations as the Secretary of the Treasury may approve, all records and accounts relating to the issue and redemption of United States notes, gold certificates, silver certificates, and currency certificates. There shall be transferred from the accounts of the general fund of the Treasury of the United States, and taken up on the books of said divisions, respectively, accounts relating to the reserve fund for the redemption of United States notes and Treasury notes, the gold coin held against outstanding gold certificates, the United States notes held against outstanding currency certificates, and the silver dollars held against outstanding silver certificates, and each of the funds represented by these accounts shall be used for the redemption of the notes and certificates for which they are respectively pledged, and shall be used for no other purpose, the same being held as trust funds.

Sec. 5. That it shall be the duty of the Secretary of the Treasury, as fast as standard silver dollars are coined under the provisions of the Acts of July fourteenth, eighteen hundred and ninety, and June thirteenth, eighteen hundred and ninety-eight, from bullion purchased under the Act of July fourteenth, eighteen hundred and ninety, to retire and cancel an equal amount of Treasury notes whenever received into the Treasury, either by exchange in accordance with the provisions of this Act or in the ordinary course of business, and upon the cancellation of Treasury notes silver certificates shall be issued against the silver dollars so coined.

Sec. 6. That the Secretary of the Treasury is hereby authorized and directed to receive deposits of gold coin with the Treasurer or any assistant treasurer of the United States in sums of not less than twenty dollars, and to issue gold certificates therefor in denominations of not less than twenty dollars, and the coin so deposited shall be retained in the Treasury and held for the payment of such certificates on demand, and used for no other purpose. Such certificates shall be receivable for customs, taxes, and all public dues, and when so received may be reissued, and when held by any national banking association may be counted as a part of its lawful reserve: *Provided*, That whenever and so long as the gold coin held in the reserve fund in the Treasury for the redemption of United States notes and Treasury notes shall fall and remain below one hundred million dollars the authority to issue certificates as herein provided shall be suspended: *And provided further*, That whenever and so long as the aggregate amount of United States notes and silver certificates in the general fund of the Treasury shall exceed sixty million dollars the Secretary of the Treasury may, in his discretion, suspend the issue of the certificates herein provided for: *And provided further*, That of the amount of such outstanding certificates one-fourth at least shall be in denominations of fifty dollars or less: *And provided further*, That the Secretary of the Treasury may, in his discretion, issue such certificates in denominations of ten thousand dollars, payable to order. And section fifty-one hundred and ninety-three of the Revised Statutes of the United States is hereby repealed.

Sec. 7. That hereafter silver certificates shall be issued only of denominations of ten dollars and under, except that not exceeding in the aggregate ten per centum of the total volume of said certificates, in the discretion of the Secretary of the Treasury, may be issued in denominations of twenty dollars, fifty dollars, and one hundred dollars; and silver certificates of higher denomination than ten dollars, except as herein provided, shall, whenever received at the Treasury or redeemed, be retired and canceled, and certificates of denominations of ten dollars or less shall be substituted therefor, and after such substitution, in whole or in part, a like volume of United States notes of less denomination than ten dollars shall from time to time be retired and canceled, and notes of denominations of ten dollars and upward shall be reissued in substitution therefor, with like qualities and restrictions as those retired and canceled.

Sec. 8. That the Secretary of the Treasury is hereby authorized to use, at his discretion, any silver bullion in the Treasury of the United States purchased under the Act of July fourteenth, eighteen hundred and ninety, for coinage into such denominations of subsidiary silver coin as may be necessary to meet the public requirements for such coin: *Provided,* That the amount of subsidiary silver coin outstanding shall not at any time exceed in the aggregate one hundred millions of dollars. Whenever any silver bullion purchased under the Act of July fourteenth, eighteen hundred and ninety, shall be used in the coinage of subsidiary silver coin, an amount of Treasury notes issued under said Act equal to the cost of the bullion contained in such coin shall be canceled and not reissued.

Sec. 9. That the Secretary of the Treasury is hereby authorized and directed to cause all worn and uncurrent subsidiary silver coin of the United States now in the Treasury, and hereafter received, to be recoined, and to reimburse the Treasurer of the United States for the difference between the nominal or face value of such coin and the amount the same will produce in new coin from any moneys in the Treasury not otherwise appropriated.

Sec. 10. That section fifty-one hundred and thirty-eight of the Revised Statutes is hereby amended so as to read as follows:

"Section 5138. No association shall be organized with a less capital than one hundred thousand dollars, except that banks with a capital of not less than fifty thousand dollars may, with the approval of the Secretary of the Treasury, be organized in any place the population of which does not exceed six thousand inhabitants, and except that banks with a capital of not less than twenty-five thousand dollars may, with the sanction of the Secretary of the Treasury, be organized in any place the population of which does not exceed three thousand inhabitants. No association shall be organized in a city the population of which exceeds fifty thousand persons with a capital of less than two hundred thousand dollars."

Sec. 11. That the Secretary of the Treasury is hereby authorized to receive at the Treasury any of the outstanding bonds of the United States bearing interest at five per centum per annum, payable February first, nineteen hundred and four, and any bonds of the United States bearing interest at four per centum per annum, payable July first, nineteen hundred and seven, and any bonds of the United States bearing interest at three per centum per annum, payable August first, nineteen hundred and eight, and to issue in exchange therefor an equal amount of coupon or registered bonds of the United States in such form as he may prescribe, in denominations of fifty dollars or any multiple thereof, bearing interest at the rate of two per centum per annum, payable quarterly, such bonds to be payable at the pleasure of the United States after thirty years from the date of their issue, and said bonds to be payable, principal and interest, in gold coin of the present standard value, and to be exempt from the payment of all taxes or duties of the United States, as well as from taxation in any form by or under State, municipal, or local authority: *Provided*, That such outstanding bonds may be received in exchange at a valuation not greater than their present worth to yield an income of two and one-quarter per centum per annum; and in consideration of the reduction of interest effected, the Secretary of the Treasury is authorized to pay to the holders of the outstanding bonds surrendered for exchange, out of any money in the Treasury not otherwise appropriated, a sum not greater than the difference between their present worth, computed as aforesaid, and their par value, and the payments to be made hereunder shall be held to be payments on account of the sinking fund created by section thirty-six hundred and ninety-four of the Revised Statutes: *And provided further*, That the two per centum bonds to be issued under the provisions of this Act shall be issued at not less than par, and they shall be numbered consecutively in the order of their issue, and when payment is made the last numbers issued shall be first paid, and this order shall be followed until all the bonds are paid, and whenever any of the outstanding bonds are called for payment interest thereon shall cease three months after such call; and there is hereby appropriated out of any money in the Treasury not otherwise appropriated, to effect the exchanges of bonds provided for in this Act, a sum not exceeding one-fifteenth of one per centum of the face value of said bonds, to pay the expense of preparing and issuing the same and other expenses incident thereto.

Sec. 12. That upon the deposit with the Treasurer of the United States, by any national banking association, of any bonds of the United States in the manner provided by existing law, such association shall be entitled to receive from the Comptroller of the Currency circulating notes in blank, registered and countersigned as provided by law, equal in amount to the par value of the bonds so deposited; and any national banking association now having bonds on deposit for the security of circulating notes, and upon which an amount of circulating notes has been issued less than the par value of the bonds, shall be entitled, upon due application to the Comptroller of the Currency, to receive additional circulating notes in blank to an amount which will increase the circulating notes held by such association to the par value of the bonds deposited, such additional notes to be held and treated in the same way as circulating notes of national banking associations heretofore issued, and subject to all the provisions of law affecting such notes: *Provided*, That nothing herein contained shall be construed to modify or repeal the provisions of section fifty-one hundred and sixty-seven of the Revised Statutes of the United States, authorizing the Comptroller of the Currency to require additional deposits of bonds or of lawful money in case the market value of the bonds held to secure the circulating notes shall fall below the par value of the circulating notes outstanding for which such bonds may be deposited as security: *And provided further*, That the circulating notes furnished to national banking associations under the provisions of this Act shall be of the denominations prescribed by law, except that no national banking association shall, after the passage of this Act, be entitled to receive from the Comptroller of the Currency, or to issue or reissue or place in circulation, more than one-third in amount of its circulating notes of the denomination of five dollars: *And provided further,* That the total amount of such notes issued to any such association may equal at any time but shall not exceed the amount at such time of its capital stock actually paid in: *And provided further,* That under regulations to be prescribed by the Secretary of the Treasury any national banking association may substitute the two per centum bonds issued under the provisions of this Act for any of the bonds deposited with the Treasurer to secure circulation or to secure deposits of public money; and so much of an Act entitled "An Act to enable national banking associations to extend their corporate existence, and for other purposes," approved July twelfth, eighteen hundred and eighty-two, as prohibits any national bank which makes any deposit of lawful money in order to withdraw its circulating notes from receiving any increase of its circulation for the period of six months from the time it made such deposit of lawful money for the purpose aforesaid, is hereby repealed, and all other Acts or parts of Acts inconsistent with the provisions of this section are hereby repealed.

Sec. 13. That every national banking association having on deposit, as provided by law, bonds of the United States bearing interest at the rate of two per centum per annum, issued under the provisions of this Act, to secure its circulating notes, shall pay to the Treasurer of the United States, in the months of January and July, a tax of one-fourth of one per centum each half year upon the average amount of such of its notes in circulation as are based upon the deposit of said two per centum bonds; and such taxes shall be in lieu of existing taxes on its notes in circulation imposed by section fifty-two hundred and fourteen of the Revised Statutes.

Sec. 14. That the provisions of this Act are not intended to preclude the accomplishment of international bimetallism whenever conditions shall make it expedient and practicable to secure the same by concurrent action of the leading commercial nations of the world and at a ratio which shall insure permanence of relative value between gold and silver.

Approved, March 14, 1900.

APPENDIX II

ALDRICH-VREELAND ACT OF 1908

[PUBLIC—NO. 169.]

An Act To amend the national banking laws.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That national banking associations, each having an unimpaired capital and surplus of not less than twenty per centum, not less than ten in number, having an aggregate capital and surplus of at least five millions of dollars, may form voluntary associations to be designated as national currency associations. The banks uniting to form such association shall, by their presidents or vice-presidents, acting under authority from the board of directors, make and file with the Secretary of the Treasury a certificate setting forth the names of the banks composing the association, the principal place of business of the association, and the name of the association, which name shall be subject to the approval of the Secretary of the Treasury. Upon the filing of such certificate the associated banks therein named shall become a body corporate, and by the name so designated and approved may sue and be sued and exercise the powers of a body corporate for the purposes hereinafter mentioned: *Provided,* That not more than one such national currency association shall be formed in any city: *Provided further,* That the several members of such national currency association shall be taken, as nearly as conveniently may be, from a territory composed of a State or part of a State, or contiguous parts of one or more States: *And provided further,* That any national bank in such city or territory, having the qualifications herein prescribed for membership in such national currency association, shall, upon its application to and upon the approval of the Secretary of the Treasury, be admitted to membership in a national currency association for that city or territory, and upon such admission shall be deemed and held a part of the body corporate, and as such entitled to all the rights and privileges and subject to all the liabilities of an original member: *And provided further*, That each national currency association shall be composed exclusively of banks not members of any other national currency association.

The dissolution, voluntary or otherwise, of any bank in such association shall not affect the corporate existence of the association unless there shall then remain less than the minimum number of ten banks: *Provided, however*, That the reduction of the number of said banks below the minimum of ten shall not affect the existence of the corporation with respect to the assertion of all rights in favor of or against such association. The affairs of the association shall be managed by a board consisting of one representative from each bank. By-laws for the government of the association shall be made by the board, subject to the approval of the Secretary of the Treasury. A president, vice-president, secretary, treasurer, and executive committee of not less than five members, shall be elected by the board. The powers of such board, except in the election of officers and making of by-laws, may be exercised through its executive committee.

The national currency association herein provided for shall have and exercise any and all powers necessary to carry out the purposes of this section, namely, to render available, under the direction and control of the Secretary of the Treasury, as a basis for additional circulation any securities, including commercial paper, held by a national banking association. For the purpose of obtaining such additional circulation, any bank belonging to any national currency association, having circulating notes outstanding secured by the deposit of bonds of the United States to an amount not less than forty per centum of its capital stock, and which has its capital unimpaired and a surplus of not less than twenty per centum, may deposit with and transfer to the association, in trust for the United States, for the purpose hereinafter provided, such of the securities above mentioned as may be satisfactory to the board of the association. The officers of the association may thereupon, in behalf of such bank, make application to the Comptroller of the Currency for an issue of additional circulating notes to an amount not exceeding seventy-five per centum of the cash value of the securities or commercial paper so deposited. The Comptroller of the Currency shall immediately transmit such application to the Secretary of the Treasury with such recommendation as he thinks proper, and if, in the judgment of the Secretary of the Treasury, business conditions in the locality demand additional circulation, and if he be satisfied with the character and value of the securities proposed and that a lien in favor of the United States on the securities so deposited and on the assets of the banks composing the association will be amply sufficient for the protection of the United States, he may direct an issue of additional circulating notes to the association, on behalf of such bank, to an amount in his discretion, not, however, exceeding seventy-five per centum of the cash value of the securities so deposited: *Provided,* That upon the deposit of any of the State, city, town, county, or other municipal bonds, of a character described in section three of this Act, circulating notes may be issued to the extent of not exceeding ninety per centum of the market value of such bonds so deposited: *And provided further,* That no national banking association shall be authorized in any event to issue circulating notes based on commercial paper in excess of thirty per centum of its unimpaired capital and surplus. The term "commercial paper" shall be held to include only notes representing actual commercial transactions, which when accepted by the association shall bear the names of at least two responsible parties and have not exceeding four months to run.

The banks and the assets of all banks belonging to the association shall be jointly and severally liable to the United States for the redemption of such additional circulation; and to secure such liability the lien created by section fifty-two hundred and thirty of the Revised Statutes shall extend to and cover the assets of all banks belonging to the association, and to the securities deposited by the banks with the association pursuant to the provisions of this Act; but as between the several banks composing such association each bank shall be liable only in the proportion that its capital and surplus bears to the aggregate capital and surplus of all such banks. The association may, at any time, require of any of its constituent banks a deposit of additional securities or commercial paper, or an exchange of the securities already on deposit, to secure such additional circulation; and in case of the failure of such bank to make such deposit or exchange the association may, after ten days' notice to the bank, sell the securities and paper already in its hands at public sale, and deposit the proceeds with the Treasurer of the United States as a fund for the redemption of such additional circulation. If such fund be insufficient for that purpose the association may recover from the bank the amount of the deficiency by suit in the circuit court of the United States, and shall have the benefit of the lien hereinbefore provided for in favor of the United States upon the assets of such bank. The association or the Secretary of the Treasury may permit or require the withdrawal of any such securities or commercial paper and the substitution of other securities or commercial paper of equal value therefor.

Sec. 2. That whenever any bank belonging to a national currency association shall fail to preserve or make good its redemption fund in the Treasury of the United States, required by section three of the Act of June twentieth, eighteen hundred and seventy-four, chapter three hundred and forty three, and the provisions of this Act, the Treasurer of the United States shall notify such national currency association to make good such redemption fund, and upon the failure of such national currency association to make good such fund, the Treasurer of the United States may, in his discretion, apply so much of the redemption fund belonging to the other banks composing such national currency association as may be necessary for that purpose; and such national currency association may, after five days' notice to such bank, proceed to sell at public sale the securities deposited by such bank with the association pursuant to the provisions of section one of this Act, and deposit the proceeds with the Treasurer of the United States as a fund for the redemption of the additional circulation taken out by such bank under this Act.

SEC. 3. That any national banking association which has circulating notes outstanding, secured by the deposit of United States bonds to an amount of not less than forty per centum of its capital stock, and which has a surplus of not less than twenty per centum, may make application to the Comptroller of the Currency for authority to issue additional circulating notes to be secured by the deposit of bonds other than bonds of the United States. The Comptroller of the Currency shall transmit immediately the application, with his recommendation, to the Secretary of the Treasury, who shall, if in his judgment business conditions in the locality demand additional circulation, approve the same, and shall determine the time of issue and fix the amount, within the limitations herein imposed, of the additional circulating notes to be issued. Whenever after receiving notice of such approval any such association shall deposit with the Treasurer or any assistant treasurer of the United States such of the bonds described in this section as shall be approved in character and amount by the Treasurer of the United States and the Secretary of the Treasury, it shall be entitled to receive, upon the order of the Comptroller of the Currency, circulating notes in blank, registered and countersigned as provided by law, not exceeding in amount ninety per centum of the market value, but not in excess of the par value of any bonds so deposited, such market value to be ascertained and determined under the direction of the Secretary of the Treasury.

The Treasurer of the United States, with the approval of the Secretary of the Treasury, shall accept as security for the additional circulating notes provided for in this section, bonds or other interest-bearing obligations of any State of the United States, or any legally authorized bonds issued by any city, town, county, or other legally constituted municipality or district in the United States which has been in existence for a period of ten years, and which for a period of ten years previous to such deposit has not defaulted in the payment of any part of either principal or interest of any funded debt authorized to be contracted by it, and whose net funded indebtedness does not exceed ten per centum of the valuation of its taxable property, to be ascertained by the last preceding valuation of property for the assessment of taxes. The Treasurer of the United States, with the approval of the Secretary of the Treasury, shall accept, for the purposes of this section, securities herein enumerated in such proportions as he may from time to time determine, and he may with such approval at any time require the deposit of additional securities, or require any association to change the character of the securities already on deposit.

Sec. 4. That the legal title of all bonds, whether coupon or registered, deposited to secure circulating notes issued in accordance with the terms of section three of this Act shall be transferred to the Treasurer of the United States in trust for the association depositing them, under regulations to be prescribed by the Secretary of the Treasury. A receipt shall be given to the association by the Treasurer or any assistant treasurer of the United States, stating that such bond is held in trust for the association on whose behalf the transfer is made, and as security for the redemption and payment of any circulating notes that have been or may be delivered to such association. No assignment or transfer of any such bond by the Treasurer shall be deemed valid unless countersigned by the Comptroller of the Currency. The provisions of sections fifty-one hundred and sixty-three, fifty-one hundred and sixty-four, fifty-one hundred and sixty-five, fifty-one hundred and sixty-six, and fifty-one hundred and sixty-seven and sections fifty-two hundred and twenty-four to fifty-two hundred and thirty-four, inclusive, of the Revised Statutes respecting United States bonds deposited to secure circulating notes shall, except as herein modified, be applicable to all bonds deposited under the terms of section three of this Act.

SEC. 5. That the additional circulating notes issued under this Act shall be used, held, and treated in the same way as circulating notes of national banking associations heretofore issued and secured by a deposit of United States bonds, and shall be subject to all the provisions of law affecting such notes except as herein expressly modified: *Provided*, That the total amount of circulating notes outstanding of any national banking association, including notes secured by United States bonds as now provided by law, and notes secured otherwise than by deposit of such bonds, shall not at any time exceed the amount of its unimpaired capital and surplus: *And provided further*, That there shall not be outstanding at any time circulating notes issued under the provisions of this Act to an amount of more than five hundred millions of dollars.

SEC. 6. That whenever and so long as any national banking association has outstanding any of the additional circulating notes authorized to be issued by the provisions of this Act it shall keep on deposit in the Treasury of the United States, in addition to the redemption fund required by section three of the Act of June twentieth, eighteen hundred and seventy-four, an additional sum equal to five per centum of such additional circulation at any time outstanding, such additional five per centum to be treated, held, and used in all respects in the same manner as the original redemption fund provided for by said section three of the Act of June twentieth, eighteen hundred and seventy-four.

SEC. 7. In order that the distribution of notes to be issued under the provisions of this Act shall be made as equitable as practicable between the various sections of the country, the Secretary of the Treasury shall not approve applications from associations in any State in excess of the amount to which such State would be entitled of the additional notes herein authorized on the basis of the proportion which the unimpaired capital and surplus of the national banking associations in such State bears to the total amount of unimpaired capital and surplus of tne national banking associations of the United States: *Provided, however,* That in case the applications from associations in any State shall not be equal to the amount which the associations of such State would be entitled to under this method of distribution, the Secretary of the Treasury may, in his discretion, to meet an emergency, assign the amount not thus applied for to any applying association or associations in States in the same section of the country.

Sec. 8. That it shall be the duty of the Secretary of the Treasury to obtain information with reference to the value and character of the securities authorized to be accepted under the provisions of this Act, and he shall from time to time furnish information to national banking associations as to such securities as would be acceptable under the provisions of this Act.

Sec. 9. That section fifty-two hundred and fourteen of the Revised Statutes, as amended, be further amended to read as follows:

"Sec. 5214. National banking associations having on deposit bonds of the United States, bearing interest at the rate of two per centum per annum, including the bonds issued for the construction of the Panama Canal, under the provisions of section eight of 'An Act to provide for the construction of a canal connecting the waters of the Atlantic and Pacific oceans,' approved June twenty-eight, nineteen hundred and two, to secure its circulating notes, shall pay to the Treasurer of the United States, in the months of January and July, a tax of one-fourth of one per centum each half year upon the average amount of such of its notes in circulation as are based upon the deposit of such bonds; and such associations having on deposit bonds of the United States bearing interest at a rate higher than two per centum per annum shall pay a tax of one-half of one per centum each half year upon the average amount of such of its notes in circulation as are based upon the deposit of such bonds. National banking associations having circulating notes secured otherwise than by bonds of the United States shall pay for the first month a tax at the rate of five per centum per annum upon the average amount of such of their notes in circulation as are based upon the deposit of such securities, and afterwards an additional tax of one per centum per annum for each month until a tax of ten per centum per annum is reached, and thereafter such tax of ten per centum per annum, upon the average amount of such notes. Every national banking association having outstanding circulating notes secured by a deposit of other securities than United States bonds shall make monthly returns, under oath of its president or cashier, to the Treasurer of the United States, in such form as the Treasurer may prescribe, of the average monthly amount of its notes so secured in circulation; and it shall be the duty of the Comptroller of the Currency to cause such reports of notes in circulation to be verified by examination of the banks' records. The taxes received on circulating notes secured otherwise than by bonds of the United States shall be paid into the Division of Redemption of the Treasury and credited and added to the reserve fund held for the redemption of United States and other notes."

SEC. 10. That section nine of the Act approved July twelfth, eighteen hundred and eighty-two, as amended by the Act approved March fourth, nineteen hundred and seven, be further amended to read as follows:

"SEC. 9. That any national banking association desiring to withdraw its circulating notes, secured by deposit of United States bonds in the manner provided in section four of the Act approved June twentieth, eighteen hundred and seventy-four, is hereby authorized for that purpose to deposit lawful money with the Treasurer of the United States and, with the consent of the Comptroller of the Currency and the approval of the Secretary of the Treasury, to withdraw a proportionate amount of bonds held as security for its circulating notes in the order of such deposits: *Provided*, That not more than nine millions of dollars of lawful money shall be so deposited during any calendar month for this purpose.

"Any national banking association desiring to withdraw any of its circulating notes, secured by the deposit of securities other than bonds of the United States, may make such withdrawal at any time in like manner and effect by the deposit of lawful money or national bank notes with the Treasurer of the United States, and upon such deposit a proportionate share of the securities so deposited may be withdrawn: *Provided,* That the deposits under this section to retire notes secured by the deposit of securities other than bonds of the United States shall not be covered into the Treasury, as required by section six of an Act entitled 'An Act directing the purchase of silver bullion and the issue of Treasury notes thereon, and for other purposes,' approved July fourteenth, eighteen hundred and ninety, but shall be retained in the Treasury for the purpose of redeeming the notes of the bank making such deposit."

Sec. 11. That section fifty-one hundred and seventy-two of the Revised Statutes be, and the same is hereby, amended to read as follows:

"Sec. 5172. In order to furnish suitable notes for circulation, the Comptroller of the Currency shall, under the direction of the Secretary of the Treasury, cause plates and dies to be engraved, in the best manner to guard against counterfeiting and fraudulent alterations, and shall have printed therefrom, and numbered, such quantity of circulating notes, in blank, of the denominations of five dollars, ten dollars, twenty dollars, fifty dollars, one hundred dollars, five hundred dollars, one thousand dollars, and ten thousand dollars, as may be required to supply the associations entitled to receive the same. Such notes shall state upon their face that they are secured by United States bonds or other securities, certified by the written or engraved signatures of the Treasurer and Register and by the imprint of the seal of the Treasury. They shall also express upon their face the promise of the association receiving the same to pay on demand, attested by the signature of the president or vice-president and cashier. The Comptroller of the Currency, acting under the direction of the Secretary of the Treasury, shall as soon as practicable cause to be prepared circulating notes in blank, registered and countersigned, as provided by law, to an amount equal to fifty per centum of the capital stock of each national banking association; such notes to be deposited in the Treasury or in the subtreasury of the United States nearest the place of business of each association, and to be held for such association, subject to the order of the Comptroller of the Currency, for their delivery as provided by law: *Provided*, That the Comptroller of the Currency may issue national bank notes of the present form until plates can be prepared and circulating notes issued as above provided: *Provided, however*, That in no event shall bank notes of the present form be issued to any bank as additional circulation provided for by this Act."

SEC. 12. That circulating notes of national banking associations, when presented to the Treasury for redemption, as provided in section three of the Act approved June twentieth, eighteen hundred and seventy-four, shall be redeemed in lawful money of the United States.

SEC. 13. That all acts and orders of the Comptroller of the Currency and the Treasurer of the United States authorized by this Act shall have the approval of the Secretary of the Treasury who shall have power, also, to make any such rules and regulations and exercise such control over the organization and management of national currency associations as may be necessary to carry out the purposes of this Act.

SEC. 14. That the provisions of section fifty-one hundred and ninety-one of the Revised Statutes, with reference to the reserves of national banking associations, shall not apply to deposits of public moneys by the United States in designated depositaries.

SEC. 15. That all national banking associations designated as regular depositaries of public money shall pay upon all special and additional deposits made by the Secretary of the Treasury in such depositaries, and all such associations designated as temporary depositaries of public money shall pay upon all sums of public money deposited in such associations interest at such rate as the Secretary of the Treasury may prescribe, not less, however, than one per centum per annum upon the average monthly amount of such deposits: *Provided, however*, That nothing contained in this Act shall be construed to change or modify the obligation of any association or any of its officers for the safekeeping of public money: *Provided, further,* that the rate of interest charged upon such deposits shall be equal and uniform throughout the United States.

Sec. 16. That a sum sufficient to carry out the purposes of the preceding sections of this Act is hereby appropriated out of any money in the Treasury not otherwise appropriated.

Sec. 17. That a Commission is hereby created, to be called the "National Monetary Commission," to be composed of nine members of the Senate, to be appointed by the Presiding Officer thereof, and nine members of the House of Representatives, to be appointed by the Speaker thereof; and any vacancy on the Commission shall be filled in the same manner as the original appointment.

Sec. 18. That it shall be the duty of this Commission to inquire into and report to Congress at the earliest date practicable, what changes are necessary or desirable in the monetary system of the United States or in the laws relating to banking and currency, and for this purpose they are authorized to sit during the sessions or recess of Congress, at such times and places as they may deem desirable, to send for persons and papers, to administer oaths, to summons and compel the attendance of witnesses, and to employ a disbursing officer and such secretaries, experts, stenographers, messengers, and other assistants as shall be necessary to carry out the purposes for which said Commission was created. The Commission shall have the power, through subcommittee or otherwise, to examine witnesses and to make such investigations and examinations, in this or other countries, of the subjects committed to their charge as they shall deem necessary.

Sec. 19. That a sum sufficient to carry out the purposes of sections seventeen and eighteen of this Act, and to pay the necessary expenses of the Commission and its members, is hereby appropriated, out of any money in the Treasury not otherwise appropriated. Said appropriation shall be immediately available and shall be paid out on the audit and order of the chairman or acting chairman of said Commission, which audit and order shall be conclusive and binding upon all Departments as to the correctness of the accounts of such Commission.

Sec. 20. That this Act shall expire by limitation on the thirtieth day of June, nineteen hundred and fourteen.

Approved, May 30, 1908.

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